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Report of
The Maryland Agricultural Society—
The Maryland Farm Bureau, Inc.
INCLUDING REPORTS OF THE
Maryland State Horticultural Society,
Maryland Crop Improvement Association,
Maryland State Beekeepers' Association,
Maryland Vegetable Growers' Association,
Maryland Stockmen's Association,
Maryland Tobacco Growers' Association,
Maryland State Poultry Council,
Associated Women of the
Maryland Farm Bureau,
4-H Club Conference.
Maryland Nurserymen's Association

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REPORT OF
MARYLAND
AGRICULTURAL SOCIETY
THE
MARYLAND
FARM BUREAU, Inc.

Including Reports of

The Maryland State Horticultural Society
The Maryland Crop Improvement Association
The Maryland State Beekeepers' Association
The Maryland Vegetable Growers' Association
The Maryland Stockmen's Association
The Maryland Tobacco Growers' Association
Maryland State Poultry Council
Associated Women of the
Maryland Farm Bureau
4-H Club Conference
Maryland Nurserymen's Association

Volume XXX, for the year 1945

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LETTER OF TRANSMITTAL

To His Excellency, Herbert R. O'Connor,
Governor of Maryland.

Sir:

I herewith submit to you, as directed by the Act incorporating the Maryland Agricultural Society, and also the Horticultural Society, this report for the year 1945, which contains a detailed statement of the receipts and expenditures of the Society as approved by the Executive Committee and Advisory Council. It contains the proceedings of the Thirtieth Annual Meeting of the Maryland Agricultural Society, Maryland Farm Bureau, Inc., and annual meetings of the Affiliated Associations.

I trust that an inspection of its contents will convince you that the funds appropriated for this purpose have been wisely and judiciously expended.

Respectfully submitted,

CHARLES E. WISE, JR.,

Secretary.

January, 1946.
Baltimore, Md.

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Secretary-Treasurer, Louise Brown.....18 Park Avenue, Gaithersburg, Md.

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**REPORT
OF THE
THIRTIETH ANNUAL MEETING
Maryland Farm Bureau, Inc.**

January 10-11, 1946

President R. C. F. Weagly presented H. S. Leaverton, Vice-President, as presiding officer at the opening session.

MR. LEAVERTON: The first thing on our agenda is reports of Auxiliary Groups, and first on the list is Mr. Zack Turner, Insurance Representative.

FARM BUREAU MUTUAL INSURANCE

ZACH TURNER, State Agent

Your Farm Bureau Mutual Automobile Insurance Company of Columbus, Ohio, state office at 2 E. North Avenue, Baltimore, Maryland, has just completed its seventeenth year of operation in Maryland and Delaware and its seventh year of operation in the District of Columbia. The records last year were all anyone could ask for.

Once again it is my pleasure to report the progress of an American institution which insures and protects nearly a million citizens. Our Farm Bureau Insurance program in 1945 made the same signal strides which have characterized its growth for nearly two decades. Today we are operating in 12 states and the District of Columbia. Family Hospital insurance is being offered in most of our states. In Maryland and Delaware, Hospital Insurance and surgical benefits are offered. Somerset County is the only county in these states which has availed itself of the opportunity, but other counties are considering the possibilities. An ever-increasing number of Americans from farms and cities are serving themselves and each other, through the medium of Farm Bureau Insurance.

Present policy writing gives promise that our insurance family will continue its steady growth; all companies are in sound financial condition. Our agency force has been increased in Maryland, Delaware, and District of Columbia in order to assure complete service to all policyholders. With the tireless efforts of our agents, claim department, and home office staff, we can look forward to 1946 with confidence and assurance. Your Farm Bureau Insurance Companies pledge themselves to the kind of service and cooperation which will assure a better America and a better world.

Today we have more than 500,000 policies in force in the Farm Bureau Mutual Automobile Insurance Company—40,000 in Maryland, 7,000 in Delaware, and 2,000 in the District of Columbia. New coverages written in 1945 were: Maryland, 32,881; Delaware, 4,709; and the District of

Columbia, 1,764. Additional coverages were offered. General Liability and Farm Employer's Liability amounted in premiums in 1945 to \$21,000; burglary, robbery and theft, accident and health, 488 policies; workmen's compensation, \$31,543 in premiums; and many other kinds of casualty insurance. Farm Bureau Mutual Fire Insurance Company made rapid growth in 1945 over the previous year's record in all states, including the District of Columbia.

We have a fire coverage valuation in all states totaling \$304,103,500. In Maryland it is \$8,505,700; Delaware, \$1,789,100; and the District of Columbia, \$997,500. The agency force produced a total of \$55,036 in 1945, including \$38,371 in Maryland, \$10,313 in Delaware, and \$6,352 in the District of Columbia.

At the end of 1945, there are more than \$150,000,000 in force in the 12 states and District of Columbia, with \$7,698,482 in Maryland, \$1,203,566 in Delaware, and \$787,567 in the District of Columbia. New business written was as follows: Maryland, \$1,765,253; Delaware, \$434,368; and District of Columbia, \$431,387. Your Company actually produced in 1945 a total of \$31,791,889, surpassing all previous records. We are proud of the record and are planning for bigger and better accomplishments in the future.

I know of no other service in the world that offers the same security as life insurance. When all other investments fail, the life insurance policy will feed the children, keep shelter over their heads, keep the family together, provide education for the children, and old age income. It is the only form of insurance where every dollar you invest will be returned some day, plus interest.

Maryland Motor Vehicle Law

The Maryland Motor Vehicle Safety Responsibility Law went into effect on January 1, 1946.

If your motor vehicle (car, truck, motorcycle, etc.) is involved in an accident where there is property damage of \$50 or more, death, or any personal injury, whether your fault or not, you will lose your right to drive or own a motor vehicle, unless you can:

1. Immediately furnish security sufficient in the judgment of the Motor Vehicle Commissioner to satisfy any judgment for damages resulting from the accident.

2. Thereafter maintain proof of financial responsibility.

You can furnish immediate security by:

1. Depositing with the Division of Motor Vehicles a sufficient sum of money or other securities to satisfy any judgment or judgments following an accident, but not in excess of \$11,000.

2. File a certificate of approved automobile liability insurance. (If you are a Farm Bureau Mutual policyholder, we gladly do this for you. This is the easiest way.)

You can furnish proof of financial responsibility by:

1. Depositing \$11,000 in cash or other securities; or,
2. Filing a bond for \$11,000, either corporate or real estate; or
3. Filing a standard provision automobile liability policy, or certification by the insurance company that a policy has been issued and is in effect. (If you are a Farm Bureau Mutual policyholder, we will be glad to do this for you).

Farm Bureau Mutual Insurance Companies offer you these eight advantages:

1. Selected risk company.
2. Meets requirements of the New Financial Responsibility Law, which is effective January 1, 1946.
3. Full coverage protection in one policy.
4. Mutually owned and operated, you share in the earnings of the company through reduced rates.
5. Standard automobile policy, approved by your state insurance department.
6. Non-assessable policy.
7. Day and night nation-wide claim service.
8. Fourth largest mutual insurance company of automobiles in the United States, nearly a half-million policies in force.

During the first week in January, when the Financial Responsibility Law had gone into effect, agents in Maryland produced 10,017 coverages, the largest production for any one week in the history of the company's operation.

When you get ready to insure that new car, see your local agent. He will be in position to suggest means of financing a new car that will be advantageous to you. Your present Farm Bureau policy can be extended to fully protect your interest, as well as the organization that finances your car.

I want to take this opportunity to thank the entire agency force for its efforts and cooperation in making the year 1945 a success. The Maryland Farm Bureau and County Farm Bureaus throughout the states have helped the insurance program whenever possible and we appreciate their loyalty and support. The year 1946 will be a success if we all continue to pull together and support each other, and this is my pledge to the Maryland Farm Bureau.

MR. LEAVERTON: Next on the agenda is a report from the Associated Women of the Maryland Farm Bureau. We have a very good representative from the Eastern Shore, Mrs. C. J. Kern, who will give that report.

REPORT OF ASSOCIATED WOMEN

MRS. C. J. KERN, President

In reporting the activities of the Associated Women of Maryland Farm Bureau at the close of 1945, which marks the second year of my service as President, the thought uppermost in my mind is this—I have another lovely bead to add to my rosary of memories which I shall cherish the rest of my life. The opportunity afforded to meet many of you and the warm friendships which have been made have repaid me many fold for the time and effort which have gone into the work. As President O'Neal has so often said, "Farm Bureau folks are fine folks," and it has been a real pleasure to work with all of you.

This has been a busy year, and in checking over the entries in my little date book I was utterly astounded to find how many and varied have been the functions in Farm Bureau which have helped to make 1945 a banner year. This record was only made possible through the fine cooperation of everyone and I would like to take this opportunity to express my personal appreciation and that of our Associated Women's organization to the membership, to President Weagly and Mr. Wise, the State Board of Directors, all members of Extension and to Martin Sutton and Mr. Smith for their wholehearted support in our endeavors to help promote the work of Maryland Farm Bureau. We are pleased to report 21 of our county organizations of Associated Women are actively functioning.

Two meetings of our presidents have been held in Baltimore with 20 county chairmen present at each. In March we planned our program of work for the year and in October met to report the results. At this meeting also each associated chairman was asked for suggestions for the program of our annual meeting held yesterday. We feel these meetings are of immeasurable value where the exchange of ideas helps develop incentive to build a better county organization.

Seven district meetings were held during this year. Three of these were dinner meetings where the groups were delightfully entertained in the homes of Mrs. Atlee Armour, Mrs. Randall Spoerlein and Mrs. P. D. Brown, who serve as directors of their respective districts. We find in this type of meeting attended by the county presidents and one other Farm Bureau woman from each county of the district, many valuable ideas are presented and plans developed which are adaptable to the adjacent counties comprising that district.

Four meetings of our Executive Board have been held, at one of which, with the very able assistance of Mr. Wise, a very comprehensive study of the By-laws of our organization was made for the purpose of simplifying and bringing them up to date with those of Maryland Farm Bureau.

We feel that our women have done their bit in helping Maryland Farm Bureau reach and exceed the membership goal of 10,000 for 1945. We on the Eastern Shore wish to commend Martin Sutton our field representative,

for the fine program he has developed for the acquisition of membership. It was a real pleasure to cooperate with him in attending a series of nine meetings covering the shore to which both men and women were invited. The results we feel are due in a large measure to the active participation of both organizations. I am sure Mr. Smith, too, has made outstanding progress, although I am not as familiar with the membership program on the Western Shore. We do know, however, that the Associated Women have been cooperating in the solicitation work in many of his counties.

In reporting on the Clubmobile fund contributed, I want to thank everyone who has helped us to reach the grand figure of \$790.71, which added to the \$765 sent to the national last year, makes a total of \$1,555.71. Two counties deserve honorable mention for their fine contributions—Wicomico, Mrs. Edgar Williams, president, sent \$200, and Frederick with Mrs. Culler as president sent \$65. We have donated \$200 toward the China Relief fund for 1945, most of the counties sending \$10.

The Pennies for Peace fund which goes toward the support of the organization known as the Associated Country Women of the World has grown to the sum of \$25.

A number of new Planning Groups was reported at our meeting yesterday. As was stated last year, we all feel that the future success of Farm Bureau in the nation, as well as in our own state, depends in a large measure on the development of such groups. The last planning group news letter prepared by Mr. Wise points out 10 suggestions of benefits derived by attendance at such meetings which to me are so outstanding I shall take time to quote: "1. Provides a chance to exchange viewpoints and discuss common problems; 2. Gives our family social contact with congenial friends and neighbors; 3. Helps us keep informed on local, state and national affairs; 4. Discussion teaches us to be able to disagree agreeably; 5. Helps make democracy work; 6. Meetings are the life of Farm Bureau; 7. Promotes good fellowship; 8. Helps us to promote cooperatives to improve farm living; 9. Makes us better neighbors; 10. Assists us to improve our farm and home practices." These are *all* valuable benefits, many of them follow our principles of everyday living in our homes, consequently we feel that if you as an individual have profited in any way by just one of these "benefits" your participation in the planning group program has been very worthwhile.

Other activities within the state in which I have been pleased to participate were the annual and banquet meetings in 12 counties. These, of course, have been very pleasant social affairs but they have also proven very educational since they afforded an opportunity to study the different plans and programs followed in the various counties. I wish to express my appreciation for the invitations extended. It was with real regret that I found I was unable to be in Allegany or Howard counties, due to conflicting obligations. At the invitation of Mrs. Scarborough, President of Harford Associated Women, I attended a very delightful tea where nearly 100 women were present. With Mrs. Weagly I attended a meeting of the

Woman's Interest Section of the War Department of Public Relations in Baltimore, where we were in contact with leaders of many of the women's organizations of several states. I appreciated being asked to attend with the other state officers of Farm Bureau, a district conference of the Insurance Companies of Farm Bureau, also in Baltimore. One outstanding event was the opportunity afforded me by Dr. Symons to appear on the program of the Extension Conference substituting for Mrs. Weagly, who was in attendance at state meetings of Farm Bureau in the West. I was glad also to attend a regional meeting of the Farm Home Advisory Committee of Southern States presided over by Mrs. Sarah Porter Ellis, who is in charge of the Farm Home Service Department of that organization. For the third consecutive year it was my privilege to present the \$10 awards given by the Associated Women since 1939 to five outstanding 4-H Club girls. We are glad to know that Club Week activities will be resumed next year and the monies will be used by the recipients for the purpose for which they were originally contributed. We feel it is an honor to our group to be afforded the opportunity to help to promote such a worthwhile cause. We were pleased to hear Donald McKnight, 1945 4-H Club national Leadership Winner address the annual meeting of Harford County Farm Bureau recently. He is an outstanding public speaker for a young man and shows great promise as an organization leader in the future. He very generously gave credit to his county Farm Bureau for the assistance the membership has given in the promotion of 4-H work. He spoke of the setting up of adult advisory committees in Harford for this purpose and I would like to state to all Extension workers, the Associated Women of Farm Bureau stand ready to cooperate in every way. We realize fully that our tomorrows lie in the hands of the young people of today.

It has been a real privilege to attend all meetings of the Executive Board and Directors of Maryland Farm Bureau. One day was spent in company with Mrs. Weagly, who was a guest speaker, at the annual meeting of Delaware Farm Bureau. A second day was spent in Dover to assist with the organization of the Associated Women of that state. Regional meetings of the presidents and secretaries of the Northeast were held in New York in January, April, June and September, all of which I attended. The fact was brought out in Chicago that the Northeast was the only region which continued holding these quarterly meetings in 1945, which raises the question that perhaps here lies the key to at least part of the reasons why the Northeast, under the able leadership of our organization director, Mr. Nelson Jost, received such high honors which I shall mention later.

The grand climax to the year's work was the opportunity to again attend the national convention and to serve my state as a voting delegate at the meeting of the Associated Women held in Chicago. The state chairmen were in attendance at an all-day business session on Saturday, December 15. It was very interesting and instructive to hear the reports of women coming from practically all of the Farm Bureau states of the Union. On Sunday the voting delegates were entertained at a very delightful luncheon by the National Associated Women. One of the most interesting reports given

was the annual report of the activities of our charming and efficient Administrative Director, Mrs. Sewell. How one person could possibly travel so far and do so many things in one year amazed all who heard her. It pleased us very much that the Maryland Associated Women received honorable mention in her report for our assistance to our sister state of Delaware. We feel deeply honored to have both Mrs. Weagly and Mrs. Sewell participating in this state meeting.

It is, of course, impossible to express our feelings of pride at the ability, poise and charm displayed by our own Mrs. Weagly as she presided over the large group assembled for the general session on Monday. She has brought honor to our state and it was only fitting that Maryland rank as she did at this national convention among the honor states of the American Farm Bureau. Five of the states in the Union who made the Big Brother Goal were in the Northeast region and Maryland was one of those seven winning states.

The year 1945 has brought sadness to our group of Associated Women. A very lovely memorial service was prepared and conducted by Mrs. Atlee Armour at our meeting yesterday which we feel should be shared with you and I quote:

"This little memorial for Mrs. Davis and Miss Myers is not intended to foster sadness nor gloom but to encourage tender memories of the pleasure we had in knowing and working with them. They were always found at these meetings encouraging the officers and giving a welcome smile to all who came in contact with them. We cannot change the Divine law but we can face the days ahead with courage and hope, being thankful for the joy we have had in knowing them.

Beautiful life is that whose span
Is spent in duty to God and Man;
Beautiful calm when the course is run.
Beautiful twilight at set of sun.
Beautiful death with a life well done.

While the hymn "Lead Kindly Light" was softly rendered, two candles flanking a lovely bouquet were lighted "In memory of our departed friends."

MR. LEAVERTON: The next on our program is a report from the 4-H Clubs, and it gives me great pleasure to present Miss Doris Clopper of Hagerstown, who will make that report.

As Miss Clopper read her report, large goal posts were held up to illustrate the goals she mentioned.

REPORT OF 4-H CLUBS

MISS DORIS CLOPPER

I feel that we have something in common—I, too, live in the country. To me, it is a place of quietness, charm and beauty. There we just seem to be nearest to nature and God.

As a rural girl I have had the opportunity to become a 4-H member. My record for six years is just like that of many thousand such records for girls and boys of Maryland for more than 25 years.

Clothing is the high point in my project work. I have made over 100 garments. In fact, the dress I have on is made from my mother's 7-year-old spring coat, and cost me about 50c.

My leaders asked me to tell you that my clothing record was one of 12 in the United States to place in the scholarship class. This means that I will be able to go to college, and I plan to start in the Fall.

Each summer I can an average of 100 jars of fruits and vegetables from my victory garden. During the war years all of us in 4-H work have done everything possible to raise more food.

And, of course, I learned to cook and prepared and served all the meals for two months while mother was in the hospital. 4-H teaches us how to select the proper foods and how to prepare them in the best way for good health.

The volume of figures for agricultural and home economics projects carried by Maryland club members this past year runs into the hundreds of thousands. I wish I had time to give you some of them but I don't.

The fundamental thing in 4-H club work is that we prove to ourselves (we demonstrate in other words) that each new practice we use is sound. We work out most of our problems on the farm and in the home. We are all the time seeking and finding better ways of doing things. 4-H gives us vision and along with it confidence to carry out this vision.

As 4-H boys and girls, we do a good many things together. We have helped in all the scrap drives, worked with the Red Cross, and during the recent 8th War Loan Drive, club members sold approximately \$100,000,000 worth of war bonds.

In 15 counties we older youth have organized Senior 4-H Council groups. I belong to one in Washington County. It is our aim to help younger club members and to have educational and recreational programs for ourselves. During the summer delegates from these councils attended a 4-H Work Shop at the University. There we had speakers and discussion periods on such subjects as Building the Peace, Choosing a Life Mate, Facing the Economic Situation, and Looking Ahead to Better Homes. In November, 1,800 4-H members and their leaders gathered at the University of Mary-

land for their State 4-H Club Day. We are looking forward to the return of our State 4-H Club Week which will be held August 5-10 at College Park.

One of the strongest links in our organization is the volunteer local leader. We club members can never cease to be grateful to these men and women who are always working with us in our home community. And, of course, no 4-H club member can do his best without the support of his parents.

Last month, along with 25 other delegates from Maryland, I had the marvelous experience of attending the National 4-H Club Congress in Chicago. Here we adopted ten Guide Posts for our 4-H Club programs.

First: We are facing the need for developing our talents for greater usefulness—that we may give the best service possible as citizens of the United States.

Second: We are working for the time when not only neighbors of the rural communities, but neighbors of the world can join together as friends for work, fun and fellowship.

Third: We are facing the necessity of learning to live in a changing world. This will call for skillful planning and keeping ourselves informed on the results of research and the economic situation.

Fourth: We are choosing a way to earn a living. We know that the farm cannot support all of the rural youth. About 50 per cent of us will need to seek other occupations. We need to be given responsibilities now, and we need to learn about many vocations, so that it will be easier to decide upon our life work.

Fifth: The production of food and fiber for home and market is an important guide post. The war is at a close, and many countries will soon be producing some of their own products. They will not be needing so much of ours. We must be ready for this change and be ready to handle it wisely.

Sixth: Rural youth want to be proud of their homes, and this point is creating better homes for better living.

Seventh: If agriculture is going to flourish at its best we must conserve nature's resources for security and happiness.

Eighth: Building our health for a strong America is in keeping with our health.

Ninth: We must share responsibilities for community improvement. This means the development of better educational facilities and the strengthening of our churches for spiritual growth.

Tenth: The last and highest guide post is to serve as citizens in maintaining world peace. It is a generally accepted fact that peace is the

business of youth. But truly it is the concern of everyone. It will take education, understanding, and tolerance on the part of every country—not just America.

A nation is only as great as its people. And tomorrow's world will need great followers as well as great leaders. If rural youth are to be ready for their place in this changing world we must have the strong support of such men and women who are members of the Farm Bureau. We need your experience to temper and guide our enthusiasm and zeal. We face the future without fear, knowing that as we, rural youth and adults, work together for a common goal, we will find new strength and courage for a greater tomorrow.

MR. LEAVERTON: A report from the Future Farmers of America will be given by William Chase Coale, Jr., Secretary of the State F. F. A. It gives me great pleasure to present him.

THE FUTURE FARMERS OF AMERICA

WILLIAM CHASE COALE, JR.

The Future Farmers of America, or "F. F. A." as it is commonly known, is the National organization of, by and for boys studying vocational agriculture in public secondary schools under the provisions of the National Vocational Education Acts. Organized in 1928, it has served to motivate and vitalize, the systematic instruction offered to students in vocational agriculture, and to provide further training in farmer-citizenship. The F. F. A. is a non-profit, non-political farm youth organization of voluntary membership, designed to take its place along with other agencies striving for the development of leadership, the building of a more permanent agriculture and the improvement of country life.

The F. F. A. is composed of National and State associations which, in turn, are made up of local chapters located in high schools having departments of vocational agriculture. The local chapters meet several times a month. Teachers of vocational agriculture serve as local chapter advisors, but the chapter is run solely by the students. Our State association meets twice yearly at the vocational field day in College Park in April and at the vocational field day in Frederick at the time of the Frederick Fair. State supervisors of agricultural education serve as State advisors. Representation at state meetings is made up of delegates from the local chapters. They elect their state officers. The National association meets once yearly at Kansas City. Each state sends delegates who elect the officers. The officers in turn preside over the meetings.

Programs of work in the local chapters are usually adopted at the beginning of each year. These programs are built on the needs of the individuals and the community. In most cases it will include father and son banquets, school fairs, special school drives, training in committee work and parliamentary procedure, and ways and means of entering the various

local, state and National contests. The program indicates the direction and course to follow in order to reach definite goals. There is a close relationship between local, state and national programs of work.

There are four grades or degrees of active membership—"Green Hand", "Future Farmer", "State Farmer" and "American Farmer". These grades of membership are contingent on definite accomplishment in connection with the vocational agricultural program of the school. Local chapters determine the individual's advancement in the first two degrees of membership, the state determines the third and the National Organization confers the fourth degree. Specific levels of attainment with respect to farming, earnings, investments, leadership and scholarship are set up for each degree. I might say that very few boys qualify for the American Farmer Degree. This is quite a distinguished honor.

The F. F. A. is supported financially by dues of members and donations from various agricultural organizations. These include the Farm Bureau, the State Grange, Milk Producers' Associations, County Fair Boards, local business men, service clubs, those commercial concerns that have contributed money to the Future Farmers Foundation, and the *Maryland State Fair Board*.

These donations make possible the prizes, medals, other awards and travel expenses for out-of-state trips for a few of our most worthy members.

I wish to conclude by reading to you our aims and purposes from our official Manual.

1. To develop competent, aggressive, rural, and agricultural leadership.
2. To create and nurture a love of country life.
3. To strengthen the confidence of farm boys and young men in themselves and their work.
4. To create more interest in the intelligent choice of farming occupations.
5. To encourage members in the development of individual farming programs and *establishment* in farming.
6. To encourage members to improve the farm home and its surroundings.
7. To participate in worthy undertakings for the improvement of agriculture.
8. To develop character, train for useful citizenship, and foster patriotism.
9. To participate in cooperative effort.
10. To encourage and practice thrift.
11. To encourage improvement in scholarship.
12. To provide and encourage the development of organized rural recreational activities.

I also have with me a bulletin entitled "Future Farmers of America in Action." This is a story of F. F. A. activities in picture form. Anyone who wishes one of these bulletins may receive one by writing to me at the University of Maryland, College Park, Box No. 694.

MR. LEAVERTON: The next on our agenda is the report of the Food Producers' Council, which will be given by P. C. Turner, President. In the course of his reading, Mr. Turner referred to efforts by John L. Lewis to organize the farmers, which was defeated by formation of the Food Producers' Council, and stated that one-third of the money put up for formation of the Council had been returned.

FOOD PRODUCERS' COUNCIL, INC.

P. C. TURNER, President

Reconversion from a war economy to a peace-time economy has posed many problems for the Nation to solve. Problems that demand more statesmanship than required to fight the war.

Foremost in the list is Labor with its many ramifications.

The fight between industry and organized labor can wreck our national economy. It can wreck our form of government by substituting a socialistic state for a democracy.

Time does not allow me to elaborate on that statement. My subject is "The Food Producers' Council, Inc.," a big subject to cover in 10 minutes.

It came into being by the crystallization of a wave of indignation from northeastern fruit and vegetable growers at the racketeering practices by some labor leaders in forcing truck drivers to join unions and the forced payment of exorbitant charges for unloading trucks and not allowing drivers to unload their own.

Further, the commission men and the truck drivers' union in New York, Newark and Philadelphia conspired to operate in those markets on a five-day week, these markets being closed on Saturday and Sunday.

Produce grows and ripens seven days per week. This attempt to upset the laws of nature has cost farmers in the northeast hundreds of thousands of dollars through deterioration and spoilage of perishable crops.

We are not making war on all labor unions, only the racketeers—none in Maryland. We believe they are necessary to look after the economic and social welfare of their members and believe all disputes with management should be settled by real collective bargaining. We farmers want labor to have fair wages to create a purchasing power to consume the food we produce.

The Food Producers' Council, Inc., is established with its roots in the soil. Sixty-eight farmer-owned and controlled organizations in eight states

are members; 147 individuals have made cash contributions to it; 7 farm organizations, including the Maryland Farm Bureau, are members from Maryland; 21 individuals from Maryland have made cash contributions.

Our membership is made up of Farm Bureaus, Granges, Purchasing Co-ops., Milk Co-ops. and Fruit and Vegetable Associations. Cash contributions have come from all over the nation. As our organization grows, we will expand our operations.

I am President and Manager. Mr. C. E. Wise, Jr., is Secretary-Treasurer. We have a Board of Directors which meets monthly. We have a full-time investigator and publicity man and a part-time man.

Our immediate objectives are: First: The outlawing through national legislation of racketeering practices of some labor unions as they pertain to farm trucks. We are cooperating with the National Farm Bureau, the National Grange, the National Milk Producers' Federation and the National Co-operative Council in efforts to pass the Hobbs Anti-Racketeering Bill that has passed the House and is now in the Judiciary Committee of the Senate. It will be difficult to pry this Bill out of Committee; if it can be voted on by the Senate, the best forecast is that it will pass. If we fail in this Congress, we will try again and again until it does pass.

Through conference with the Teamsters Union and Commission men in the New York market, we have made progress toward opening this market on a six-day basis. If New York is forced to open six days per week, Newark and Philadelphia will have to open also.

These goals of the Council are far-reaching. They mean much to farmers. They mean much to consumers. The challenge must be met.

If, like ostriches, we bury our heads in the sand and think we are safe, we will awaken and find labor unions have organized production, transportation, processing and distribution of all food products. Should that day come, we will then realize that we have fought the war for freedom, only to find we have lost our freedom at home.

MR. LEAVERTON: I am making our introductions very brief, as we are a little behind schedule. We will now have the report of our President. Without further remarks, I am happy to present our President, Mr. Weagly.

ANNUAL ADDRESS

R. C. F. WEAGLY, President

The abrupt ending of World War II has brought America face to face with economic, social and governmental problems of staggering proportions.

These problems cannot be dismissed, laid on the shelf, or dodged. Fortunately, Americans do not treat their responsibilities lightly.

In war or in peace, America has always produced the leadership which every emergency has demanded, and America has always won out. It

enabled the Allies to conquer Germany and Japan. It will enable America to solve the problems which are immediately ahead—no matter how difficult or complex they may be.

Now, that the war is over, the question uppermost in the minds of every American is: What does the future hold for me? In the answer to that question lies also the answer to the future of Maryland farmers.

In answering that question such issues are involved as: Markets, jobs, opportunities, profits, investments, income, purchasing power and living standards.

It calls for the adoption of such improvements as will preserve America's system of free enterprise. It calls for an analysis of the relation of government to individuals and for an evaluation of governmental services and their intrinsic value to general welfare. It demands the charting of a road so plainly marked that pitfalls can be avoided.

Throughout the State and Nation, every farmer is looking for some ray of light to guide his future operations. He is asking himself: Shall I maintain my current operations, expanded by the former demands of war? Or shall I cut back on my operations to peace-time production?

The Maryland farmer is also vitally concerned with the future plans of Industry and Labor.

We are not just agricultural producers; we are also among the heaviest consumers of goods and services produced and created by other economic groups. Therefore, in our dual capacity of producers and consumers we must maintain the very best possible relations with other groups.

As farming is an "extractive" enterprise—one which creates new raw wealth from the soil, agriculture depends for its well-being upon the consumptive capacity of other segments of our economic society.

In this postwar period agriculture could expand its productivity even more than has been done during the war years if given labor and new machinery; that is what we would like to do, but I have not seen the green light as yet. We will not see the green light until Labor, in Maryland and throughout the Nation, begin asking themselves: Will there be a constructive job for me tomorrow?

Throughout the Nation we are confronted with not only one employment objective, but with two objectives. First, we must attain a high level of productive peacetime employment. That is our immediate goal, but, over and above that, we must take steps to insure that we can maintain a high level of productive employment once we have achieved it.

Real jobs are not created; we had a sample of created jobs after World War I, and some folks still say that the Federal Government should guarantee "jobs for all." Real jobs are a by-product of the production of goods and services which people want and are willing to pay for.

I do not object to Labor organizing and to the activities of labor leaders whose primary responsibility is to see that Labor receives a fair and adequate reward for work. But this does not seem to be their objective. I don't see why labor leaders do not realize that only as we produce more can we have more to divide; and increased rewards can only come through increased production.

I am sure that farmers can well be proud that their all-time record net income was earned by large, efficient output of food and fiber for the Nation at very reasonable prices; it was the reward of genuine service to our country and not from gouging the public in its time of need.

As you know, the Maryland Farm Bureau has been and still is an advocate of an Income Tax. We feel that a tax based on ability to pay is a just tax and are sorry to see the rate of our income tax cut one-half of the original rate. Too often tax programs have been developed largely with a view to their impact upon votes. People who live in a county, state or nation pay the taxes. Business can collect taxes but those taxes are paid by the people. Our tax system should be so devised that it will help counteract both inflation and deflation. In other words, a tax rate which automatically results in surpluses in good times and deficits when times are not so good.

You may wonder why I have spent about half of my time on two subjects—jobs and taxes. It is my thinking that upon the way these two problems are handled will depend the future of our Farm Bureau.

We have continued to emphasize the fact that Farm Bureau membership is a family membership, embracing the interests of the whole farm family and welcoming the support of all of its members.

We have more than 10,000 Farm Bureau families in Maryland—an increase of over 100% in three years; of which we are all very proud. This increase in membership is due to the fine cooperation of all of you who did membership work. But as your membership grows your responsibilities have likewise grown. To maintain that membership and make an increase in 1946 will demand more services from the State Farm Bureau and especially from the county Farm Bureaus.

This year we have one county with more than 1,000 members—Frederick. And we have 4 counties with 2 directors on the Maryland Farm Bureau Board—Frederick, Baltimore, Harford and Carroll.

The Maryland Farm Bureau now has 4 commodity committees on State level: Fruits and Vegetables, Livestock and Dairy, and Poultry. These committees will present their problems to the members of the American Farm Bureau Federation Committees, on which Maryland has 2 representatives—P. C. Turner, member of the Dairy Committee, and S. L. Hoke, member of the Livestock Committee. Problems relating to other commodities may be presented to the Director of the AFBF Commodity Committee. Herman C. Aaberg is director of Livestock Department, and Porter R. Taylor is

director of Fruit and Vegetable Committee. These commodity Committees should be very helpful to the membership.

The Farm Bureau Legislative Program at Annapolis was one of the best the Farm Bureau has ever had; 100% of the legislation we desired was passed, and the legislation we opposed was defeated. Mr. Wise will give a more detailed legislative report.

One of the chief objectives of the Farm Bureau across the years has been equality of opportunity for education to all children. Although we did not sponsor, yet we lent our support to the enactment of legislation which we know will improve the public school system in Maryland.

I would like to quote a statement made by President Truman: "The future of America depends upon the character and quality of our youth. The primary problem is one of home training, general education, and character building."

During the war we learned how the health of the individual is related directly to the strength of the Nation in time of emergency. If our Nation is to be able to make the most of its opportunities and to shoulder its responsibilities in the future, more attention must be given to the health of all the people.

We in Maryland are fortunate that for several years our Secretary, Mr. Wise, has served on the Health Committee of the State Planning Commission. It is also to the interest of farm people that Mr. Wise has been designated to assist in the health program for Maryland.

In the field of public relations, the Farm Bureau is beginning to realize how important it is for farm groups to understand each other; and how necessary it is that other groups understand the real purpose of farm organization and the Farm Bureau program.

The American Farm Bureau Federation is sponsoring a Fertilizer Program that will make plant food available for the farms of the United States at a price which the farmer can afford to pay. This program will need some help from the Federal Government for a few years.

We hear the industrialists saying the same thing they have been crying for years about programs for the farmers—"Socialism." But everything the industrialists want is in the name of "free enterprise."

The time has arrived when the farm people should tell the rest of the folks that farming is a free enterprise; we have never wanted subsidies. What we have always wanted is a fair price in the market place. Where actual parity prevails between agriculture, labor, and industry, there is no possible excuse for subsidies.

In my report last year I made this statement: "It is my sincere hope that when we meet one year from now the Allied Nations will have been victorious in peace as well as in war."

You are all aware that during the past year victory has twice come to our fighting forces. As farm people we can take just pride in our contribution to those victories. Parents can rightfully say to their sons and daughters who come back from the battle front: We have produced to the limit of our capacity; we have built a strong Farm Bureau organization and, through the organization, we have built a stronger spirit of cooperation. We have promoted a spirit of good will among our fellow-men—a spirit which we hope will end war and maintain a just and lasting peace.

President Weagly added the following remarks to his prepared address:

Without mentioning any names, I want to tell you Farm Bureau folks how much I have enjoyed these years working with you. It has been a great pleasure. I have been in all of the 23 counties, not only once but several times. I have been in some of your homes, and you fed me and gave me a real comfortable bed to sleep in. I wish I could have visited all of you more, but time did not permit.

Mr. Wise and I have spent hours at work when the girls and everybody else had left the office, talking over the problems of today to the Maryland farmer, and then he would strike out for his home and I would come down to my hotel. Things have not always been pleasant, some of you wrote me and took me to task, and I have gone right back at you. I never thought you could put out a fire by running away. I may not have helped, but I tried to help. The roads are not too smooth for the president and the secretary and field men of the Farm Bureau; they do not have an eight-hour job. Neither do your girls and boys out on the farm. You know that. Due to labor shortage, you have had to hold many meetings at night, and you have been up late hours to get back to start the next day.

When I was elected President three years ago, I expressed my appreciation for the confidence you had in me. It may have been that some of you thought I would not be good enough for the job, just did not have confidence in me, but I told you that I was going to try to carry on in such a way that you would give me your support, so that the Maryland Farm Bureau might continue to grow. Well, I had your support, well over 100%, and I do appreciate your working together, both the Farm Bureau and the Associated Women, and we have all brought about this great membership. I do not claim that credit for myself, but I do claim that I did my best.

MR. LEAVERTON: The next on our program is the report of our Secretary-Treasurer, and I am going to ask Mr. C. E. Wise, Jr., to make that report.

REPORT OF SECRETARY-TREASURER

C. E. WISE, JR., Secretary-Treasurer

Today we stand on the threshold of a new era, blessed by peace but fraught with countless problems of reconversion and the rebuilding of our economy. The Farm Bureau is prepared to see that agricultural interests are given due consideration in this revamping of our economic structure.

Our state membership is at the record total of 10,514, while the American reached the sum of 986,136 for a new high of nearly 1,000,000 farm families. There is a spirit of determination and cooperation throughout the organization that will carry forward its program for farmers even more energetically than in the past year.

The year of 1945 was one of the most momentous in modern times. History will record the death of the dictators Hitler and Mussolini, the replacement of Churchill and the death of President Roosevelt, the victorious conclusion of our wars with Germany and Japan and the formation of the United Nations organization. Agriculture was represented at this conference. This is significant, as it is the first time in history that such recognition has been given when international plans were being made. The most spectacular event of 1945 was the use of the atomic fission bomb revealing a new source of energy for mankind to use.

Closer to each one of us was the end of tire and gas rationing, the end of food rationing except sugar, and the assurance that loved ones in service would soon be home. Compared to these world and national events our work has seemed insignificant but we kept at it and in doing so have laid a foundation most valuable in the reconstruction period. In spite of travel restrictions and other difficulties, the Maryland Farm Bureau has carried out its program of information, added 2,000 members, and represented farmers in legislative matters and countless other conferences.

Our success has been achieved through the fine cooperation of all my associates in the state office. Roy Weagly has made an excellent president and helped in all phases of the program. Miss Dressel and Miss Myers, until her untimely death, worked hard and efficiently to keep the state office functioning.

The 1945 General Assembly enacted 1,156 bills and resolutions out of the 1,565 introduced. Governor O'Connor vetoed 46 measures and signed 1,110. Among those vetoed was Senate Bill 176 that would have imposed a 2½ per cent tax on truck hauling receipts. Your Farm Bureau legislative representative opposed this bill at the hearing April 26. A gross income tax of 2½ per cent would have increased farm costs in marketing and hauling supplies. Special appropriations backed by Farm Bureau included in the two-year budget passed were: Codling Moth Control, \$24,500; Artificial Insemination Program, \$20,000; European Corn Borer Control, \$8,000. An item of \$20,000 for an enlarged marketing program was not included but both the Senate and House passed a resolution requesting that the Board of Public Works allocate funds for this project.

The medical care legislation was passed with an annual appropriation of \$200,000 to start this program for better medical care in rural areas. Some 16 bills that strengthen and enlarge the elementary school system are now on the statute books. A start has been made to secure better educational facilities for Maryland farm boys and girls.

The following bills we sponsored were passed: House 605 provides for a Baltimore Market Authority of 11 members to continue the study and make recommendations on the improvement of Baltimore market facilities. House 305—Truck Width Bill permits loads over the 96-inch legal limit for farm trucks. House 520—provides for egg marketing by grade and size. House 644 permits County Commissioners to levy for soil conservation. House 745 amends the egg inspection law to provide inspection of all eggs. Other bills provide for refund of the 1½c lateral road gas tax to the counties and the use of convict labor on roads. Senate 606 renews the Maryland Roadside Commission with the addition of a representative from the Grange and the Farm Bureau. Senate 86 extends the Blue Cross services to Medical and Dental care. Garrett County Bill, House 817, exempts maple sugar from provisions of the Forestry Act.

Bills we opposed and defeated were: Senate 29 which provided for a tax on cooperative patronage refunds not paid in cash. House 249 was a Constitutional Amendment to prevent the diversion of road funds; Senate 39 a roadside regulation bill, House 694 a tobacco and cigarette tax by Baltimore City.

Bills held up for further study: House 616, a Forestry Severance Law that provided for lower taxes on land placed under the Forestry Board for reforestation and with a percentage of the future timber sale going to the county. Senate 468 required both parties pay for line fences.

This session of the General Assembly was more businesslike than any in recent years and adjourned ahead of the limit set by the state constitution.

You were represented at directors' meetings of the Insurance Boards every month, four meetings of the northeast presidents and secretaries, two insurance sales meetings, a 10-state insurance sponsors meeting, all meetings of the Interstate Farmers Council and its successor, the Food Producers' Council, and many other conferences on farm labor, rain damage and agricultural plans.

On July 25 a brief was presented to the Legislative Council by Karl Loos on the taxation of cooperatives. Many farm leaders attended this hearing and appreciated the fine help given by the National Council of Farm Cooperatives on this problem. The National Tax Equality Association is attempting to curb cooperatives by advocating the taxation of patronage refunds. Mr. Loos in his brief pointed out that the savings made by cooperatives belong to members as provided by the cooperative law. These are not a profit to the corporation and must by law be distributed to patrons on the basis of business volume. He further noted that cooperatives are restricted as to articles handled and limited in sales to non-members if they qualify for the exemption under the Federal law. Our case was strengthened by the fact that Maryland cooperatives have no tax exemption and do not ask any. This fight is not over and the subject will be considered by the 1947 General Assembly.

The Interstate Farmers Council formed to combat the John Lewis move to organize dairy farmers was successful. When the unions started to force the membership of truck drivers hauling farm produce, it was asked to take up this new battle. After several meetings the members voted to disband and liquidate this organization.

In the meantime, a new organization, the Food Producers Council had been formed to fight the unionization of farmer truck drivers. P. C. Turner was made president of this organization and has carried on an aggressive program to protect farmers against these racketeering practices. Your secretary has been secretary of these two foregoing organizations. The Food Producers Council is an organization of 68 organizations in eight states and has 147 individual backers in these and many other states.

Martin Sutton and Wilbert Smith have done an outstanding job in membership work this year. They also managed the Farm Bureau Wool Pool which handled 110,000 pounds of wool in 1945. This represents 50% of the wool produced in Maryland and indicates the service rendered in securing a price of 5c per pound over local sales.

The annual meeting of the American Farm Bureau was attended by 74 from Maryland in spite of crowded trains and hotels. At the convention they saw the largest Farm Bureau group since 1940, as over 5,000 were in attendance.

During the week Mrs. Roy Weagly, President of the Associated Women of the American Farm Bureau, presided at practically all meetings of the women and met with the Board of Directors. Dr. T. B. Symons was given the Farm Bureau Distinguished Service medal for outstanding service to agriculture. Maryland was honored as one of seven states to make the top national goal called Big Brother. Twenty-one of our 23 counties have made the million member goal, placing Maryland second in this. New Hampshire which, with all of its counties qualified, is first.

Those who attended the national returned with increased pride for their state and a better idea of the many problems we must help solve. The national and state resolutions will cover these so I will not try to enumerate them but shall concentrate on a few of the most important and controversial ones.

A Government release in November stated that present plans call for the end of all wartime food subsidies by June 30, 1946. These subsidies were used by the Administration to hold living costs down and to try to stimulate production. Farmers opposed the use of subsidies on the ground that people had money to pay a fair price for food on the market. They argued that a fair price on the market was the best assurance of production and of future markets.

Despite this opposition, subsidies were used and the prices on foods so subsidized held in check. The war has passed and many food products are now priced below cost, as farmers predicted they would be under the plan. Farmers want the subsidies removed and a free market established as soon as possible. Livestock producers want immediate removal, and while dairymen agree, they desire assurance that an increased price of milk will be granted. Fluid milk prices are regulated by dealers and Government orders. Thus, the removal of OPA ceilings will not permit milk prices to rise promptly to compensate producers for the increase in cost of production.

Great care is needed in selecting the method and time for removal of the fluid milk subsidy. The time is past when a market increase could be readily secured. Winter is the high cost period, as feed is scarce and expensive.

Ample notice should be given farmers before any move is made so that they can adjust their operations. The best time for this is during the pasture season when costs are down and production is up. The food subsidy program was a mistake. It has resulted in unnecessary public expenditures and dislocated market prices. Producers will suffer a considerable loss when it is terminated. This can be minimized by careful planning and a fair consideration of producers interests, so often forgotten in wartime.

Price ceilings and the arbitrary hold the line orders brought on subsidies and disrupted the normal flow of goods. At the start of this program the price of protein was set at a relatively low level. This stimulated the use of proteins and increased feeding all along the line. These moves coupled with a faulty price structure have resulted in the present severe shortage of proteins. The department of agriculture has been asked to aid in this problem. Continued high production of protein feed stuff, a more equitable distribution of the available supply and more imports have been suggested and requested. Price control was necessary in war but must be discontinued as soon as the supply of goods or commodities is equal to the demand so that situations similar to this may be prevented. The interference by unions in the hauling of fruits and vegetables on our terminal markets and the short or 5-day market week have been discussed by Mr. Turner. We must work with the Food Producers Council for the free flow of goods and a six-day market for farm produce. This will be a hard fight and will require the active support of all members.

Farm labor this year and in the future years will be a problem. The Extension Service has done excellent work on this and deserves our thanks and our support for funds and authority to continue. Farmers can help on this by improving tenant housing conditions and making farm labor more attractive.

Old age pensions under the Social Security program are available to all employed workers except farm and domestic help. Our 1945 national

resolutions back old age pensions for full-time farm laborers. This question should be studied carefully from all angles—especially that of competition with industry for labor in the future.

Louis Bromfield in his book *Pleasant Valley* makes a clear case for soil conservation, human nutrition and the need for a fertilizer program. The following quotation sums up the results of soil waste—"As our soil grows depleted, as our diet becomes more limited, the stamina of a nation or an individual goes down hill. The evidence that poor soil makes poor people and poor people make poor soil worse and so on ad infinitum is written across the face of the whole of the earth and of mankind."

An adequate national diet means a ready market for farm products, so any attention paid to it helps agriculture. To insure future fertility, a sound program of soil conservation must be pushed. Maryland, one of the first states to adopt a Soil Conservation District law has practically all its area under soil conservation districts. More farmers must be encouraged to take advantage of this service to save their soil. Saving the soil is not enough at this late date, as fertilizer is needed to make up for past losses. Too little is known of fertilizer use and manufacture.

The American Farm Bureau has had a committee working on this for several years. In 1945 the committee reported and from this report a bill was drawn. This bill is known as the Hill-Bankhead Bill in the Senate—S. 882, and the Flannagan Bill in the House—H. R. 2922. It provides for a national fertilizer program under the Department of Agriculture with an advisory committee of farmers, one from each Land Bank District. In the states the program is under the Extension Service of the Land Grant Colleges. One part of the program provides for three pilot plants, two for phosphate and one for potash to be operated by the government for not more than five years to explore and develop modern methods of producing fertilizer ingredients. At the end of five years these plants would be offered for sale to farm cooperatives and if not purchased would be shut down.

Another provision in the program sets aside the more than 1,000,000 acres of government owned potash and phosphate deposits for exclusive use in farm fertilizer production. This is to insure a sufficient and lasting supply of fertilizer ingredients.

The bill further provides for demonstration farms in each county and while the number stated is 75, the final determination is to be made by the states. There is also provision for expanding research and experiment station programs so that every farmer may have the soundest advice on fertilizer use.

The objective of the bill is to help farmers on their fertilizer needs from manufacture to application. The fertilizer trust is fighting this plan—calling it socialistic. As Roy Weagly said, it's always socialism when

the farmer asks for help but when big business requests many times more money it's in the name of "free enterprise".

The source of the opposition to this bill should tell us how good it really is for farmers. It will take hard work to pass this legislation.

The Rural Electric Administration has stimulated the extension of electric service to thousands of farms in Maryland until today 64% of our farms have this as compared to only 20% a few years ago. Further work is needed to protect the Rural Electric Cooperative Act in Maryland and to continue the extension of electric service to more farms. The American Farm Bureau has recommended a state committee on rural electrification to confer with all utilities serving farms. We should consider such a step to help more farmers secure service and also assist those who have it to make full use of electricity.

A new program was started in 1945; namely, the four commodity committees, both state and national. These are committees on poultry, livestock, dairy and fruit and vegetable. The national committees are composed of three producers and one director from each region for a total of 16. Maryland is represented on the Dairy Committee by P. C. Turner and on the livestock by S. L. Hoke. State committees were appointed in October and have met and organized.

These groups will consider the specific problems of their particular industry and make recommendations to the Board of Directors.

The foregoing problems and others need consideration by our members and the planning groups are a good way to study them. I prefer the composite judgment of these 110 groups to the judgment of any individual in Washington or elsewhere on our problems. We need more such groups to build services like the Blue Cross, now serving 5,000 of our members, and to pass on problems as they arise. This helps the state office and it keeps the members informed. The more members we have in discussion groups the sounder our program will be and the more our membership will grow.

Mrs. Kern has given her time and energy in the organization and planning group projects—much of our success is due to her fine work.

A recent questionnaire to these groups on agricultural prices brought in some sound advice. Every group agreed with the statement that full employment is one of the best guarantees for good farm prices. This bears out the theme of President Ed. O'Neal's annual address on producing for abundance.

The prosperity of agriculture depends upon national prosperity. Today there is every element present for a period of good times if we all work.

We hope that labor and industry will settle their differences soon and produce consumer goods to meet the pent-up needs. Production in abun-

dance is required to offset the tendency toward inflation. Agriculture will produce abundantly for peace as it did for war. May we have the energy to build our organization to greater strength, the mental capacity to formulate a sound program and the courage and cooperation to carry it out for the benefit of agriculture and the nation.

MR. LEAVERTON: The next report will be on the "Relation of Bees to Agriculture". Mr. James I. Hambleton will give that talk.

RELATION OF BEES TO AGRICULTURE

JAMES I. HAMBLETON

Mr. Chairman, ladies and gentlemen, I am very glad to have the opportunity to say a few words about the part beekeeping plays, or should play, in agriculture.

I believe that many of you think of beekeeping as a catalytic agent, or a substance necessary when two chemicals are put together to create a new substance. The substance does not change, but its mere presence is very essential. I think in the same manner a vigorous beekeeping industry in the State is highly essential to many branches of agriculture.

There are in the country,—and many of the crops grow right here in this State—some 50 crops that must have pollinating elements to produce seed, and unless they have those elements they will not produce food or seed. We take for granted that pollination will take care of itself, and there was a time when no one worried about pollination. It was possible to produce 10 to 12 bushels of a crop to the acre, where today perhaps 8 to 10 bushels of seed per acre may be produced, and perhaps not even that much. The situation came upon us gradually; no one seemed to notice it, but it has been caused by the loss of many of these wild pollinating elements such as the bumble bee.

Automobiles kill a surprising amount of bumble bees. Bumble bees die in the fall, all die except the queen bee. In the spring the queen bee has to go out to the fields and fly back and forth, and unless she can produce enough worker bees, the crops cannot be pollinated. The queen bees are big and heavy, do not fly very rapidly, and in the highway they are struck by the automobiles. That has helped to cause the death of bumble bees, which means that for every queen bee lost perhaps 150 worker bees are lost, and they are necessary to pollinate the clover.

Almost all foods grown in Maryland have to have this pollinating influence, and without bees you cannot produce the seed. I would like to give you an illustration of what is taking place, and how serious this all is. Utah at one time was the principal alfalfa seed producer in the country, produced 24,000,000 pounds of alfalfa seed annually at the end of the first World War. The total production in Utah has gone down steadily every year until today the entire production of alfalfa seed in that State is less than 4,000,000 pounds annually,—a steady decrease in production in the

space of 25 years from 24,000,000 pounds to 4,000,000 pounds. They have not been paying any attention to these pollinating elements. But now they are looking into that problem, as they realize they must do something to bring back some of those elements.

A bumble bee is worth its weight in gold on a farm. I live on a farm in Maryland. The fact that you farmers must come to realize is that you have to have bees to get clover seeds. The bumble bee is better than a honey bee; they have longer tongues. Most flowers produce nectar, but the pollination is just as effective as the nectar. Practically every legume has pollen as well as nectar. Bees are human in many of their characteristics. They will concentrate in the vicinity where they can get the greatest amount of sugar; they never make a mistake. They prefer red clover.

Honey bees are not nearly as much use on the farm as the bumble bees, but the bumble bees are on their way out, and there are not half enough honey bees to take care of pollination needed. Whenever sweet clover is raised in the vicinity of alfalfa, the alfalfa is left by the bees, as they prefer the sweet clover.

We like to think we have gone into this matter very fully, but agriculture is relatively new in our country. In the countries where agriculture is well established, such as Russia and Germany, they are going so far as to train bees to work specially, to get the bees to work on red clover instead of smartweed. Their experiments have caused an increased seed production as high as 30%. A great many farmers do not want the bees because they sting. Then, too, they think the bees have to pay for themselves in honey. But almost every branch of agriculture is affected by beekeeping.

Pollination of a great many of the legumes is going down rapidly. Farmers are now trying to get together to put on a tremendous research program to improve the situation. They must realize that beekeeping is not all for the honey. A bee has to be fed all the time. If they are not fed each day, they will starve to death. When the price of honey is down, there are not so many bees kept. Eighty percent of pollination is done by honey bees, not by wild bees. For that reason there is no alternative for beekeeping. It should be encouraged. I do not know of any place in the country where there are enough bees. I believe that in many counties it would pay to buy honey at a good price and dump it in the river if they could not sell it, in order to have the bees for pollination.

This is one of the things which from now on must have greater attention. Many years from now beekeeping will not necessarily be thought of as producing honey, but for the great help in pollination.

MR. WISE: I was requested to announce a survey of the radio programs that our people want. The broadcasting companies want to cooperate with farmers, and they want to know what kind of programs you prefer. If you will think this over and give them some idea of

what you want on the questionnaires now being passed out, you may help to get the radio programs you want.

MR. LEAVERTON: Next on our program is one of the things giving farmers more concern than any other one thing,—the Farm Labor Outlook. Mr. Paul Nystrom is going to make a report on that. Mr. Nystrom has been working on that problem for the past two or three years, and I am very glad to present him now.

THE FARM LABOR OUTLOOK

PAUL E. NYSTROM, Deputy Director, Farm Labor Program

It is quite opportune that a discussion of Farm Labor comes at the close of a long morning's program when everyone is tired. The farmers, too, are tired of the long, arduous hours they have had to keep. But, the end is not yet and we are asked for another big year, one more stretch to meet. So, tired as you are this morning, you have to listen to one *more* speech before lunch.

I am going to try to be brief. I will divide my talk into three headings.

First, I want to briefly give an accounting of the stewardship of the Extension Service during the war. I will make two analyses,—first at the time of the entry into the war, and the situation as it appears to be in 1946, and then I want to make some suggestions about the type of program I think necessary to better conditions in Maryland.

The first point,—when Agriculture entered the war there was a surplus of food and a surplus of labor. When President Roosevelt called for his fantastic number of airplanes and ships and tanks, the war plants looked to the farms and they lured the farmers into the war plants with their promise of large wages. Do not forget that agriculture has done its part, not only in the production of food, but a large part in the production of the number of airplanes and ships necessary for the war. However, the nation woke up to what was going on in 1942, and there was a cry all over the country that the food of the nation was jeopardized by the shortage of labor on the farms,—the all-around the year farmers, and also the harvest hands to meet the required problem.

The first thing to do was to stop the flow of labor from the farms to the factories, the war plants. Through the combined efforts of Mr. Turner, and later Mr. Wise, and the Chairman of the State Grange, and also Senator Tydings, some 12,000 able-bodied farm workers were deferred from the draft. In some way, farmers got the crops planted, the animals cared for and raised, and then came the problem to get them harvested. With opportune legislation, we were able to get some 10,000 emergency workers, many of these taken from farm to farm. We had in all some 200,000 placements, all sorts of arrangements were made to meet the emergency, and we did meet it.

But now, the war is over, the Extension Service feels that the honeymoon is over. What about 1946? The Extension directors realize that

they have a very hot potato in their hands in handling the farm labor program for 1946. Our own Dr. Symons took leadership in this just as he has in the past. He took the position that for one more year the Extension Service must try to guide the farmers to meet the problem for 1946.

We all admired the young lady who spoke and told us how she had made a dress out of her mother's old coat at an expense of 50 cents for material. That is what we may have to do in 1946. The situation is going to be as serious, if not more serious, than at any time during the war. We all expected when the war was over that many of the farmers would be coming back to the farms. But they have acquired new skills in the war plants, and they are securing jobs paying them more money, and they do not want to come back to the farms. Also, we had expected many service men to come back to the farms who went into the service from farms. But this has been such a mechanized war that those boys are now skilled mechanics, and a lot of them are trying to find jobs in other industries, and we cannot look to them as possible farm laborers.

The nation was alarmed at the prospect of some eight to ten million men unemployed at the end of the war, but in November there were less than two million unemployed, re-organization went faster than was expected.

If the steel workers go out in January or a little later, as is now expected, the farm employment will be even more serious. Then, too, Maryland has been blessed for a number of years in getting a number of German war prisoners to work on the farms. But they are all going back to Germany, and that is going to add to the problem.

These factors all point to one thing,—that the farm labor situation will continue to be tight. I believe we have reached the low point, and any change, generally speaking, will be an improvement. In general, we face continued farm labor shortage in 1946.

Now, I am going to tell you some of the things that I believe will help the situation. I believe it is going to be necessary this coming year to be more economical than we have ever been and to arrange all sorts of short cut labor saving in farming operations. You will have to exchange labor between the farms, just as you exchange equipment. Neighbors must lend their labor just as they do their machines.

Then, I think that the farm itself must be made more attractive. I do not mean with higher wages. The status of the farm worker is perhaps the lowest of all our classes of population, even in the farm homes as many of you must know. Say a farmer has three sons, he will say, "Now, William is a smart boy. I will make him a lawyer; James is bright, too, and he would make a good doctor; but Joseph is a dull boy, I guess I will just have to make him a farmer." Now, that must be reversed if we are going to hold them.

I am told that in the vicinity of Baltimore City some people are going out to the country, willing to work in order to get homes because of the crowded condition in Baltimore City. If we are going to compete with industry, we must make great changes in the houses and working conditions of workers on farms. I understand that arrangements are to be made to bring labor from the Bahamas and from Jamaica, and perhaps it can be arranged to have some of that labor take the place of the German prisoners. That labor can be moved from place to place. Another thing, the State of Maryland may send representatives into Kentucky to get some exchanges of labor. The State of Maine encouraged some 1,500 white small farmers to come there to aid in the harvesting of their potatoes.

Following these meetings it is our plan to hold in this hotel a meeting of representatives of the Extension Service of all of the States in the East to consider our problems of farm workers, and to try to make plans for the moving of labor up and down the East Coast. At that meeting we hope to have the leading citizens of every county to consider the situation and try to arrange some program to meet it.

The economic prospects are bright, very bright. I believe that working together we will be able to meet the labor shortage problem in 1946 and the years to come.

MR. LEAVERTON: After some announcements, we will adjourn to meet again at 1:30 P. M.

AFTERNOON SESSION

PRESIDENT R. C. F. WEAGLY, Presiding

Mr. Weagly called the meeting to order and asked for the report of the Credentials Committee, which was as follows:

REPORT OF CREDENTIALS COMMITTEE, 1945
MARYLAND FARM BUREAU, INC.

County	Paid-Up Members	Number of Directors	Number of Delegates
Allegany	255	1	5
Anne Arundel	364	1	7
Baltimore	790	2	16
Calvert	229	1	5
Caroline	552	1	11
Carroll	760	2	15
Cecil	138	1	3
Charles	596	1	12
Dorchester	327	1	7
Frederick	1,030	2	21
Garrett	251	1	5
Harford	770	2	15
Howard	365	1	7
Kent	410	1	8
Montgomery	541	1	11
Prince George's	461	1	9
Queen Anne's	306	1	6
St. Mary's	290	1	6
Somerset	329	1	7
Talbot	291	1	6
Washington	532	1	11
Wicomico	664	1	13
Worcester	263	1	7
	10,514		
Associated Women		2	6
Md. Stockmen's Assn.....		1	1
Md. State Horticulture Society.....		1	1
Md. State Poultry Council.....		1	1
Md. Cooperative Milk Producers' Assn., Inc.....		1	3
Md. Tobacco Growers' Assn.....		1	3
Hillsboro-Queen Anne's Cooperative.....		1	1
Md. Vegetable Growers' Assn.....		1	1
Md. State Beekeepers' Assn.....		1	1
Md. Crop Improvement Assn.....		1	1
Md. State Horse Breeders' Assn.....		1	1
Md. Nurserymen's Assn.....		1	1

MR. WEAGLY: At this time it is a real pleasure to introduce another little short man, like myself, who is doing a fine job among the boys. I present Dr. H. F. Cotterman, Supervisor of Vocational Agriculture.

Dr. Cotterman presented the awards in the Maryland Farm Bureau F. F. A. contest, as follows:

**LIST OF WINNERS IN THE
MARYLAND FARM BUREAU—F. F. A. PROJECT CONTEST**

(Prizes to be awarded at the Farm Bureau Meeting in the Lord Baltimore Hotel at 2:00 P. M., January 10, 1946)

<i>Project</i>	<i>Rank</i>	<i>Winner</i>	<i>Teacher</i>	<i>High School</i>	<i>Medal</i>
Baby Beef:	First	*Blackhall Brothers	Omar J. Jones	Glasva	Gold
	Second	Leroy Johnson	Howard Anderson	Princess Anne	Silver
	Third	Paul Edward Lutz	Louis F. Ahalt	Middletown	Bronze
Corn:	First	Joseph Leon Summers	T. C. Martin	Hughesville	Gold
	Second	Fred Keister	James H. House	Oldtown	Silver
	Third	James Phillip Rollins	T. C. Martin	Hughesville	Bronze
Dairy:	First	Fred Fry	Sydney T. Lawler	Sherwood	Gold
	Second	Calvin Coolidge Waters	Louis F. Ahalt	Middletown	Silver
	Third	James O. Montgomery	Warren C. Smith	Frederick	Bronze
Potato:	First	Warren Rush	Marvin G. Callis	Accident	Gold
	Second	Robert Dodge	O. T. Graser	Oakland	Silver
	Third	Earl B. Wantz	S. P. Caltrider	Charles Carroll	Bronze
Poultry:	First	Bruce Koogle	Louis F. Ahalt	Middletown	Gold
	Second	H. William Miller	Sydney T. Lawler	Sherwood	Silver
	Third	James Howard Hood	S. P. Caltrider	Charles Carroll	Bronze
Swine:	First	William C. Myers	Gerald A. Biggs	Hagerstown	Gold
	Second	Clayton Ball	Howard Anderson	Princess Anne	Silver
	Third	Ernest Castle	Louis F. Ahalt	Middletown	Bronze
Tobacco:	First	James H. Thompson, Jr.	T. C. Martin	Hughesville	Gold
	Second	Robert E. Simpson	Omar J. Jones	Glasva	Silver
	Third	Phillip Simpson	Omar J. Jones	Glasva	Bronze

*Alex and William Blackhall—twin brothers in partnership.

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<i>Project</i>	<i>Rank</i>	<i>Winner</i>	<i>Teacher</i>	<i>High School</i>	<i>Medal</i>
Tomato:	First	Gerald Webster	Howard Anderson	Princess Anne	Gold
	Second	Lorraine Stem	S. P. Caltrider	Charles Carroll	Silver
	Third	Joseph Hotecheck	P. S. Flegel	Hurlock	Bronze
Misc. Crops:	First	John W. Stouffer (Sage)	Harold A. Remsburg	Smithsburg	Gold
	Second	Nevin K. Lewis (Sweet Corn)	Harold A. Remsburg	Smithsburg	Silver
	Third	Charles L. Swift, Jr. (Hay)	Frederick Fuller	Jarrettsville	Bronze
Misc. Livestock:	First	Fred Fry (Sheep)	Sydney T. Lawler	Sherwood	Gold
	Second	Charles Frish	S. P. Caltrider	Charles Carroll	Silver
	Third	J. Resley Schnebly	Robert J. May	Clearspring	Bronze
Misc. Truck:	First	Donald Leister	S. P. Caltrider	Charles Carroll	Gold
	Second	Robert E. Simpson	Omar J. Jones	Glasva	Silver
	Third	Joseph Lee Jenkins	Omar J. Jones	Glasva	Bronze
Diversified Farming:	First	*Joseph L. Jenkins	Omar J. Jones	Glasva	Gold
	Second	†Osborne Ayres	James H. House	Fort Hill	Silver
	Third	‡Joseph Leon Summers, Jr.	T. C. Martin	Hughesville	Bronze

*30 turkeys
1/2 A tobacco
3/4 A garden

‡23 pigs
12 A hay
2 A corn
2 A oats
1 A wheat
1 dairy heifer
30 chickens
1 A cherries

†1 1/2 A tobacco
10 A corn
100 chickens

MR. WEAGLY: I wish I could live long enough so that I might see one of these boys up here in my place. Thank you for your fine program.

We are now going to have short talks, not over five minutes. The first is on "Electricity on the Farm," by A. V. Krewatch.

FARM ELECTRIFICATION IN 1946

A. V. KREWATCH, Extension Agricultural Engineer,
University of Maryland

Farm electrification advanced during the war years and by the end of 1945, 65%, or 27,300, of Maryland's 42,300 farms have electric service. Rates have been reduced and line extension policies throughout the State materially liberalized.

During these few minutes I can best explain the present farm electrification opportunity by referring to three charts. Back at the beginning of 1941, of the unserved 21,452 farms, 8,295 had lines available within one-quarter mile or less, but were not connected. We considered desire, landlord-tenant relationships, long lanes, type of farm, and cost of connecting as logical reasons.

Cost of getting electric service in most cases, need no longer be a comparative reason. In most counties of Maryland, now, every mile of line that can show a \$6.00 to \$8.00 or \$10.00 signed-up use of current will sufficiently meet the requirements for building. We can best appreciate this company liberalization by my saying that they now compare favorably with REA co-op plans. Down the lane lines in many counties can now be financed in terms of current used at no extra cost to many users and we may eventually see the private extension down the lane grouped with the line along the road as is now true in one of our counties.

This second chart will show what I think can be accomplished by the end of 1948. Companies and cooperatives, right now, are ready to build 1,500 miles of line as rapidly as materials are made available and workmen will return to the line crews. This will make it possible for 4,230 farms to be connected this year if strikes will not slow up progress.

Prospects look good for connecting 3,000 more farms by the end of 1947 and 2,100 more by the end of 1948. By January 1, 1949, with favorable conditions, we may see 36,630, or 87%, of our farms connected, 2,600 with lines available but not connected, and, 3,070 farms in the doubtful, if ever, class.

This third chart shows costs of electricity. We have two groups, large suppliers and small suppliers. Because of these reductions I estimate rates have dropped some 10%. One of the few items of cost that continued to go down. For how long? I don't know, and that brings me to one present consideration with regard to rates I would like to touch on before I close. I am speaking now to those of you somewhat familiar with rates and are representatives of organizations. I have been asked the question by farmers in certain counties, "Why do I have to pay more for current just because I put a new water heater in my milk house?", or because "I want a 7½ hp. motor". In most of these cases the farmer is already using considerable current.

On the other hand, some companies are asking, "When is a farmer a domestic user and when does his operation become commercial?", "If a farmer hatches eggs on a domestic rate, what about the eggs hatched in town?" "I would like to ask," should the size of the motors or the use to which electricity is put determine the rate applied?

We all realize, I'm sure, that as farm uses increased, the electrical demands on the rural lines increased. Companies and Coops alike favor increased use, but they would like to keep electrical demand on the lines and generating facilities from increasing out of proportion to increased use.

I'm no rate specialist, but I don't think the difference between applying the lower domestic rate or the higher commercial rate should be based on the size of the farm operations or the electrical demand. It, in my mind, should be based on the class of load. If a farmer, for instance, buys eggs or milk and hatches or processes them for resale or enters into a commercial operation on behalf of his neighbors then he is competing with similar other business and the higher commercial rate may well apply.

I hope rate makers will not confuse this farm equipment demand with a commercial classification and apply features of a commercial rate to farm uses, thereby increasing the cost of the home consumption as well as the farm consumption for the larger farm user. This has already occurred in some of our Maryland counties.

Rural rates may well carry a reasonable stop or top limit on electrical demand but too many provisions and penalties in order to play safe will not speed farm electrification. During the coming years farm home uses as well as feed grinders, brooders, milk coolers, and like equipment about the farm will be more essential than ever. We all know that farm help is short. We will have to make the most efficient use of our time and equipment. Food is needed.

MR. WEAGLY: At this time we will have a talk on "Artificial Breeding of Dairy Cattle," by Floyd J. Arnold.

ARTIFICIAL BREEDING OF DAIRY CATTLE

FLOYD J. ARNOLD, Extension Dairy Specialist

I was pleased when I received an invitation to make this report for two reasons:

1. I believe it is a project that merits your attention and support;
2. The kick (push) that really started the development which has taken place originated with the Harford County Farm Bureau at its committee meeting on April, 1944.

To keep in five minutes I can only give you a very brief outline of this work. I was called over there to attend a meeting of a committee

appointed by the Harford County Farm Bureau to consider this matter, and it was really from that meeting on June 28th, 1945, that we have developed plans for a State co-operative.

I will try to make a long story short, and give you a very brief review of the development to date, and some of our plans for the future. The Incorporators elected were County Representatives, "Wills, Baltimore; Richardson, Carroll; Zimmerman, Frederick; Hoopes, Harford; William Powell, Howard; King, Montgomery; and T. Powell, Washington County." The Breed Association representatives were Swartz, Harmon, Remsberg and Stiles.

During the summer a Certificate of Incorporation and By-Laws had to be prepared, and the certificate was filed on November 30. That meets all the requirements of the law. Actually, we had a lot of meetings and discussions after the April meeting, but the organization really took shape from the meeting of June 28, 1945. At that time the managers were named, the Board of Directors chosen, the Incorporators, and the names mentioned above chosen.

After the meeting of June 28th and during the summer the development went on, the by-laws, the certificate of incorporation agreed upon, and filed. The first official meeting really took place December 15, at which time the Association was officially organized, and plans for the future considered. We hope to conduct educational meetings to explain the program, get the districts organized, and start a membership campaign. We hope that can all be done this winter and spring, so that we can really start work in the spring, and any help the Farm Bureau can give will be appreciated.

I want to give you the principal reason or objective. Artificial insemination is to increase the productive capacity of our dairy herds. If this can be done, it will mean more efficient and more profitable herds. A few of the facts which cause us to believe this can and should be done are:

1. Average production is below the minimum level for efficient production—6,000 pounds. Our average production is about 5,000 pounds of milk per cow. According to the best figures we can obtain, it ought to be 6,000 pounds. Maryland ranks very low on the list. At least 25 States produce more than ours on the average. New Jersey and New York average 8,000.

In this State one-third to one-half of our dairymen keep grade bulls. Only about one-half of the pedigree bulls maintain or increase production. As a matter of fact, an ordinary bull is used in a herd of 20 cows, and through artificial insemination this may be stepped up to 1,000 cows.

Now, I want to give you a few of the important points covered in the By-Laws:

1. The bull barn and laboratory will be located at the University;

2. Breeding circuits will be organized wherever there is sufficient interest;
3. The members of each breeding circuit shall elect a Board of Managers of not less than 5 members;
4. Each circuit with a minimum of 1,000 cows will be represented on the Board of Directors;
5. The bulls of each breed will be selected by a committee of five elected by the Board of Directors;
6. The membership fee is \$10.00. Breeding fee \$5.00 for members.

I want to add that this is a new project. It has merit. Otherwise, we would not give time to it. I hope you will help to make it a success.

MR. WEAGLY: Our next speaker is going to speak on "Hybrids to Come." Dr. W. B. Kemp will give the talk.

HYBRIDS TO COME

DR. W. B. KEMP, Director, Maryland Experiment Station

First I want to express my pleasure at meeting you this afternoon. I believe I can better utilize my time by reading my talk.

In recent years plant breeders have achieved remarkable success in developing hybrids for each corn-growing section of the country that clearly outyield the open-pollinated varieties formerly grown there. These successes direct attention to the possibility, first, of *further* improvements in corn hybrids and, second, of utilizing hybrid vigor in *other* plants as well.

The phenomenon of hybrid vigor has been recognized for a long time. In fact, man has been taking advantage of it, without his knowledge, in many plants. He has recognized a mule as a hybrid and has realized that some of its desirable characteristics trace to its hybrid origin. However, it is only in relatively recent years that he recognized the accidental hybrid origin of commercial bananas and has realized that the absence of seeds, which absence creates commercial value in this fruit, involves the same forces that make the mule sterile also.

During the first decade of this century man learned enough of the principles of genetics to speculate on means of utilizing hybrid vigor in corn. During the second decade he demonstrated the accuracy of his earlier speculations. By the close of the third decade hybrid corn was a commercial reality. Today the production of hybrid corn seed represents a \$70,000,000 business. This value of the seed alone will increase to \$100,000,000 within the next few years. At the same time, ever better and better hybrids are being produced. In Maryland, those which are recommended today are likely to be almost unknown 10 years hence because they will have been replaced by hybrids of superior merits.

This phenomenon of hybrid vigor is characteristic of practically all plant and animal forms in the first generation of some crosses. Its expression can be intensified and can be achieved uniformly by certain preliminary breeding and selection of the types to be crossed. It can be utilized commercially only if the seed is easy to produce or if the resulting hybrids can be propagated vegetatively.

Seed is easy to produce on plants where the pollen-bearing flowers are separate from the fruit or seed-bearing flowers or where the flowers are large and hence easy to handle and where many seeds develop from a single cross. Pollen-bearing flowers are separate and easy to handle in corn and in the cucurbits; that is, cantaloupes, watermelons, squashes and cucumbers. Therefore, it is not surprising that the first plant worked commercially was corn. However, hybrids that are usable commercially now have been produced in cucumbers and squashes and can be expected soon in cantaloupes and watermelons. Indeed the number of seeds produced from each cross in these plants is greater than the number in corn.

Another group easy to work is the solanaceous plants; that is, tomatoes, peppers, eggplants and the closely related tobacco. Among these, anthers must be removed from the flower that will bear the fruit, but the flower is large and many seeds are borne in each fruit. Therefore, it is not surprising that commercially usable hybrids have been produced in tomatoes.

There is a usable onion hybrid in spite of the fact that onions have none of the floral characteristics enumerated as essential. In this plant a factor for male sterility has been discovered and utilized so that removal of the pollen-bearing anthers is not necessary. Comparable hereditary factors are being discovered in other plants.

In asparagus a desirable hybrid, if once discovered, could be propagated with ease because of the fact that fruits are not borne on the same plants that bear the pollen, and all plants are perennial.

Among animals, too, the phenomenon is being utilized where propagation is rapid; first in chickens and later in pigs.

Finally, it can be said truthfully that we are entering a new era in plant and animal breeding for commercial use; an era in which the vigor peculiar to the first generation of a wide cross will be utilized wherever techniques can be devised for the economical production of such hybrids. And we can be assured further that the confidence gained from results with corn will shorten materially the time required for commercial development of hybrids in other species.

MR. WEAGLY: Next is a talk, "On the Firing Line," by our County Agent from Charles County, P. D. Brown.

"WHAT'S AHEAD" FOR THE FARMER AND HIS FAMILY ON THE FIRING LINE ALONG THE HOME FRONT?

P. D. BROWN, County Agent, Charles County

Undoubtedly, many necessary changes in farming processes face us in order to convert from a wartime to a peacetime basis with the minimum of economic loss. It may be much more difficult than the conversion from peacetime to wartime production.

All products of the farm during the past four years found a ready market, either at home or abroad. Over-production was not a problem except for the limitation of labor, machinery and supplies.

Now we are faced with planning a food production program that will be in line with the consuming market—not a local or domestic market, but a world-wide market. In making these plans we still have an uncertain farm labor condition to contend with.

We on the firing line, extension workers and farm folks, have a common goal for which we are fighting—better farming and better farm living.

To accomplish these objectives we must first make full use of the ammunition we have at hand. Then, we must be assured of a constant source of supply of new and better weapons and ammunition to win the fight.

Competing in a world market, farmers must be kept informed on factors affecting world trade, on world-wide economics and world-wide supply and demand. From now on we cannot consider the line fences of our own individual farms as the boundaries of farm problems. Not even county, state or national boundaries can be the limitations of our study and knowledge of our farm job.

The ammunition we now have is not being used to its fullest extent. We are just becoming conscious of the vast field of conservation of natural resources. Certainly, if we are to build up and maintain a profitable agriculture that will secure and maintain better farm living, we must study and apply soil, forestry and wildlife conservation. It is basic to our farming problem. The old saying, "Take care of the soil and the soil will take care of you," is a motto that every farm home should have displayed where every member of the family can see it every day of the year.

The avenues are open for every farmer to learn and make use of soil conservation practices that will insure high productivity. It is our job on the firing line to put them into use. Let's not put them aside as new-fangled ideas that are not practical to our individual farm. Perhaps the Soil Conservationist and the County Agent do not know all the answers. But, certainly, the knowledge of these two, coupled with that of the farmer, can and will make it work to advantage on most every farm.

Great progress has already been made in new and more productive varieties and strains of plants and in the breeding of livestock. This is a field that has unlimited possibilities. Are farm people using them to the greatest extent?

The proper use of labor-saving devices on the farm and in the home will also be a help in attaining the high degree of efficiency that is necessary to attain better farm living and help us over the barrier of reconversion.

Last, but not least, we must make use of the knowledge we have on the conservation of health and proper nutrition if we are to keep our bodies and minds at the highest productive level.

This, in brief, is some of the ammunition we now have stored and ready for use on the "firing line." It has been supplied by the research work of the U. S. Department of Agriculture, the many state experimental stations, interested private corporations and the sound, practical experience of farmers.

Research will be a continued source of supply of new ideas, for better labor-saving machinery, improved methods of conservation and sounder health and nutrition information.

Federal and State Agencies and farm organizations can constitute the general staff and the supply service of the land army. It is their duty to see that farm people are supplied constantly with the results of research in a form that farm people can use in securing a better living.

Rural leaders, kept informed by the above agencies, are the shock troops of the reconversion of agriculture. Farm organizations with a sound program and headed by conscientious leaders, hold in their hands the key to victory in this postwar agricultural battle.

Better farm living, like a lasting peace, can be secured by the combined efforts of all. We must have the spirit to help our neighbors as well as ourselves.

Farm organizations can make the greatest contribution by building a membership strong and influential enough to solve the problems confronting us. Federal and State Agencies can make and transport the ammunition but the real firing line is made up of the many million tillers of the soil—the farmers.

MR. WEAGLY: Our next speaker needs no introduction to this group, nor to any other group of farmers in this country. His last recognition that I know of was received out in Chicago at the meeting of the American Farm Bureau. Each year they give two awards for distinguished service in agriculture, and this year our own Dr. Symons was one of those who received the award. I take pleasure in presenting him to you at this time.

MAKING THE MOST OF IMPROVEMENTS

**DR. T. B. SYMONS, Dean and Director,
University of Maryland**

Under this unusual title given me by your secretary, I am happy to extend congratulations for a most successful year.

First, I want to express grateful appreciation to your officers and directors for suggesting my name for consideration by the American Farm

Bureau Federation for the Distinguished Service Award of that great organization. It is an honor which I treasure most highly, and which I feel very humble in accepting. The award is made, I feel, in recognition of the splendid organizations we have working together for the advancement of Maryland farmers—the Extension Service and the Farm Bureau—rather than to myself.

I would pay special tribute to all who contributed to the wonderful membership accomplishments of the past year, and I know that means many, many people. Such achievements are the result of loyal effort all down the line. I wish that all of our Maryland members could have witnessed the acclaim extended to the counties and state at Chicago, where it was announced that the million member goal for the national organization had been exceeded.

Let us here declare and determine to make the most of it in 1946, both by utilizing the added strength of increased membership effectively and efficiently, and by inducing an even larger number of Maryland farmers to join in the opportunities, benefits and inspiration that can only come from membership in such an organization.

The year of victory is ended. The year in which we should begin to reap the fruits of victory begins. The only reason for winning a war is to win the peace that follows. Can we not here declare that our greatest ambition is to do our part in rehabilitating a world that is sick from the greatest war in history? Our victory must be interpreted in terms of serving freedom and humanity. Agriculture the world over will do more to this end than any other single industry. Let us make the most of this opportunity for the promotion of peace and good will, as well as for the prosperity and up-building of the people engaged in farming and living on the land.

I am tempted, my friends, to pursue a somewhat different line of thought than might be expected in thinking of the topic assigned me. We hear much of the economic problems and situation in the postwar period, and, of course, it is essential that those problems be recognized and intelligent methods be found for their solution. If we are to make the most of the next few years, and also the more distant future, however, I believe that we must think somewhat more beyond the physical values than it has been possible for us to do during the last decade, or more. Prior to the war, we had a depression to deal with, when making ends meet was the major problem. Then, we all have vividly in mind the wartime conditions, when we were being called upon to carry one emergency program after another. I wonder, now, if we cannot think a bit about some of the things that in the long run mean the most in life, particularly in rural life.

I have said many times that there is nothing greater in life than our friendships. In the rush of the last several years, we have neither had the time and opportunity to cultivate and enjoy our old friends, nor to make new friends to the extent that we should to get the most out of life.

The same is true with respect to the benefits and advantages of life in the country. We have not been able to do the things which we would like to do in order to make that life as full, satisfying and enjoyable as we want it to be, and as we know so well that it can be. Aside from the fact that wartime shortages of materials, equipment and labor have made it impossible to improve the farms and homes, the anxiety and turmoil of the war period just do not fit into the development of the finer qualities of rural life and its associations.

So, my friends, I am wondering if we cannot look forward with considerable confidence to greater progress during the next few years in the development of rural life in Maryland, and the people who have the good fortune to live on the farms and in the rural homes, than has been possible for more than a decade.

We have witnessed astounding new developments in many fields under the urge of all-out effort to win the war. We cannot yet foresee the implications of these new developments on our peacetime economy, including their effect upon agriculture and rural life. The preceding speakers have outlined briefly a few of the lines in which important progress is being made. The greater use of electricity, which probably can bring more of the conveniences and comforts which until comparatively recently belonged almost exclusively to city people, is now reaching out to the rural areas at a rapid rate. You have heard some of the things which have been accomplished with hybrid strains of crops. The effect of this work with the corn crop is fairly well known, but it is only an indication of what may be accomplished by plant breeders. Artificial breeding of dairy cattle is practically ready to be launched on a fairly wide scale in the state.

To these might be added many significant developments in both the production and marketing fields. New uses for farm products, new methods for preserving and marketing farm commodities, such as frozen products, and new equipment and machines for performing tasks on the farm and in the home are all within sight. If we are to make the most of such improvements, we must be able to fit them into our particular circumstances and into our daily lives. Let us hope that the economic situation for agriculture will be such that we can take advantage of the better things that lie ahead, and that we may have the time and inclination to make the most of them for our own individual farms and farm families.

May I venture to suggest a few things, which appear to me might be included in a limited program for rural people during the next few months, or possibly years. I call it a "limited" program because it leaves out so many things that probably should be included.

In the first place, I believe we should have in mind providing an adequate diet for all consumers. Aside from the humanitarian value that derives from a well-nourished people, a wholesome, prosperous agriculture goes hand in hand with a sound and prosperous national economy. Farmers in wartime have demonstrated their ability to produce when there is ample

market for their products at profitable prices. If the people in all industries and all modes of life are to make the most of the next few years, it is essential that conditions be maintained whereby farmers can follow a policy of full production, and do so with reasonable return for their efforts.

Along with the foregoing, the years ahead will place a greater premium on efficiency than we have experienced in former years. Together with the more efficient machines and equipment that will be available, there will be need for growing the varieties and strains of crops that produce most efficiently, keeping the kinds of livestock and poultry that make most efficient use of the feeds and labor put into them, and for careful planning of farm and home operations in such a manner as to make best use of all facilities and labor available. An efficient farm, like any other business, can operate at a good profit when an inefficient farm is operating at a loss. Likewise, efficiency in the home pays its dividends in the form of more satisfying family living.

Family-Size Farms

To my mind, ladies and gentlemen, the war demonstrated one fact from which we can derive a great deal of encouragement. The agriculture of this country has been built very largely upon the family-size farm. It is upon that type of farms and the people who own and operate them that we must depend quite largely for the welfare of agriculture and rural life in the years ahead. It is gratifying to note that in a time when production was needed in a hurry and in vast amounts, and when industry was organizing for mass production, the farmers of the country met the challenge. In contrast to the difficulties experienced by immense industries in harnessing their productive capacities, agriculture, with its six million farms, mostly of the family-size type, was quickly geared to war production.

Undoubtedly, with the increased use of mechanical power and greater production per man, there is a tendency toward somewhat larger farm units. However, it has been demonstrated that immense commercial units, lacking much that has always been associated with farming and rural life in this country, are not essential to efficient production.

Cooperatives

Farming constitutes the largest group of small businesses in the country. In this way, it keeps alive the spirit of private enterprise. These very facts point to the need for cooperative organizations and the joining together of a number of these small units in order to accomplish some of the things and enjoy some of the benefits which can be obtained only by operating on a larger scale and with greater power and influence than is possessed by the individual. Support of farmers cooperatives of various kinds will be a must if the individual farmer is to make the most of his opportunities.

There is much, I believe, that we can accomplish through organized effort to improve the marketing and distribution of our agricultural prod-

ucts. This will require careful research and demonstration of improved methods of production, grading, and packaging of many of our products. The progress in retail self-service food stores offers great opportunities in fresh fruits and vegetables, as well as in poultry and eggs. The modern use of refrigeration, dehydration, packaging, and air transportation present a challenge to all of us in these fields.

Advertising Maryland Products

We are doing practically nothing in the broad field of advertising Maryland's agricultural products. We are living in an age when the merits of all kinds of products are constantly placed before the eyes and dinned into the ears of prospective buyers and users. That advertising in its various forms, including radio, is effective is being demonstrated conclusively all the time. Such advertising has been proved effective when applied intelligently to certain farm products, such as Idaho and Maine potatoes, citrus fruits, and others. Maryland can and does produce agricultural products that merit introduction to prospective purchasers and users as far and wide as the volume justifies, and an organized effort to that end would be of value to both producers and consumers.

Some of the other things in the limited program I have in mind can only be mentioned. There will be need for rural people to take an active interest and have a part in many broad questions, some of national and international extent, which vitally affect their well-being. No longer can they confine their interests to the boundaries of their farms, or even to their neighborhoods and counties. Such broad questions as the use of subsidies, price supports for various commodities, price ceilings, labor, taxation proposals, and many others are connected directly with the situation on the farm and in the farm home. There will be an added responsibility on public agencies, such as the Extension Service, to provide information giving the pros and cons on such broad questions, in order that farm people may discuss them in their groups and among themselves and arrive at intelligent conclusions.

There will be need for farm people to support research and public education, in order that they may keep abreast of affairs in the broadened and quickened economy in which they must live.

Conservation

I can only mention one of the most important parts of the program immediately ahead, and the only reason that I do not enlarge upon it more, rather than some of the things I have mentioned is that a great deal of attention has been given it on other occasions. I refer to an energetic campaign for conservation of our soil resources. Commendable results have been achieved, even under the restrictions of wartime. With the equipment and additional labor that should be made available during the next few years, great strides should be made in preserving our most valuable natural resource.

In conclusion, let me express a word of optimism regarding the production situation in the coming year. I believe that we can look with confidence to about the same production as during the last few years and the ability to dispose of our products at prices that will yield a satisfactory return. The labor problem will be with us, but it has been handled in former strenuous years and I have confidence that a way will be found to produce and harvest the crops in 1946.

And, finally, the end toward which all of our planning and effort must be directed, if we are to make the most of farming and rural life in Maryland, not only in the years immediately ahead, but for the more distant future, must be to make that mode of life and that occupation so attractive that the ablest young men and women will see in it the future that appeals to them.

MR. WEAGLY: It has been suggested by the Secretary that my wife should be called up here to say something, and I am going to give her the honor of presenting the next speaker.

MRS. WEAGLY: This is one time, when my husband is presiding, that I have a chance to speak. That is the only time.

Ever since the inception of the Farm Bureau in the little State of Maryland, we women felt that we could assist in the Farm Bureau work, but for a number of years we traveled along beside our husbands satisfied by having them call us the "better half". At times we felt that they wanted that situation so we would not think we were the whole thing. In the States and Counties where the women assist in Farm Bureau work, the membership has increased and the interest is greater. One thing about the women, when they have a job to do, they do it quite thoroughly.

This is indeed a very great privilege for me to present the next speaker. Mrs. Charles W. Sewell is the Administrative Director of the Associated Women of the American Farm Bureau. She has been serving in this capacity for 19 years. She has so endeared herself in the hearts of the people that she is known as the "Sweetheart of the American Farm Bureau". We are indeed privileged to have her on the program this afternoon. She will now address us.

THE FARM FAMILY TODAY

MRS. CHARLES W. SEWELL

It is a very great pleasure for me to again have the opportunity to come back to Maryland and enjoy with you this splendid program yesterday and today. This morning, when Mrs. Kern made her report, she made some reference to the many places I go in the course of a year, and she said she wondered how I could get to so many places in such a short time. I thought I might be like the little Jewish boy who went to camp with some other little boys and he was not a good swimmer. One day they were all out in a boat and the boat upset and the other boys

could swim and they made out for the shore. When they got there, there was Ikey sitting on the pier, and one of them asked "Ikey, how could you get back here like this? We thought you could not swim?" Ikey said "Oh, I just kept on talking all the way back." That is the way I was able to get to all those places.

This afternoon I should like for you to think with me on the position of the American farm family today as it faces with the rest of the country and the nation this thing which we call and know as "Peace". We have had a great many problems and projects presented to us looking toward the very position in which we find ourselves today. I have seen and heard of a great big volume of postwar plans for agriculture, many of which have been tried and found wanting. It reminds me of the little boy bringing his report home. His father asked him about it. He said, "Well, I only got 25 in reading, and 30 in spelling—but I did get 92 in postwar planning." We have a lot of that sort of thing.

This fall, in North Carolina one day, the work permitted a drive, not in the schedule already very heavy, and I was delighted to go. I was glad to get Mr. Shaw's and Mrs. Manteo's statement on what to me seemed very symbolic, that it was worth while to go back to the beginnings of this new land, and consider a replica of Port Raleigh, showing the attempt of the early settlers to defend themselves against the ravages of the savage Indians. It had various port holes through which a man on the inside might look out, and then smaller port holes for the women and children, small ones for the small children, so that they might help if the men fell in battle, and in that way the savages were not able to cause the inroads they wanted to make on those families.

Today it seems to me we are in a similar position with the women and the girls and boys taking their places working with you men folks in trying to do the things we must do in the organized way if we are to meet the challenge of tomorrow. It is surprising to us to realize that in other countries like China women are voting for the first time, only enfranchised a few years, and yet those women are enjoying better property laws than many States of the United States.

I would like to pay a tribute to the American farm woman for the work she has just done in this war. When Captain Stassen spoke at the National, he paid a tribute to the splendid service which the American farm women had rendered during the war, and the fact that because of their efforts and the food raised by them our army could receive supplies wherever they were, the supplies could be brought on board the ships without going back to distant headquarters for them.

In 1944, our National Vice-President at that time, Mrs. Weagly, had a resolution passed, which said that the American farmer must be organized, just must be, in order to protect the farm home, to insure the permanency of agriculture as an institution, a profession, if you will,

and in order to teach the individual farmer that he owed a distinct contribution of his time and money to his country, his community, his fellow men. Now, why should we bother to protect the farm home? What does it give to us that cannot be supplied in any other place? I believe you would agree with me that the farm home does a great many things in helping to mould these boys and girls, helping to form their character—those boys that came before you this afternoon. They will be the future farmers of Maryland, and they have received from their farm homes some things that cannot be taken away from them.

We have to work upon a farm whether or not we like it, and the records of these young people in raising livestock, feeding poultry, and raising these other crops, the air of confidence about them, has a great deal of bearing upon the future of America tomorrow. The papers today are full of lists of crimes, but we feel that these crimes are not committed by the boys or girls brought up on a farm. The close relationship of the family, the father, the mother, the children brought in everyday relationship all contribute to the forming of their character, and in teaching them the habits of economy. They have to learn to think quick, to look out for themselves, have to have initiative.

One of the 4-H boys had a pig entered in a contest, and the pig was disqualified because it weighed 305 pounds, five pounds over-weight. He was not discouraged, he just went out and took that pig for a walk, and came back and he weighed 297 pounds.

There is so much about this farm home. I am reminded of a story told me of an old man, living in the vicinity of the great project of the T. V. A. They were flooding some of that land, and they had to take the poor little house in which that old man had always lived. Of course, they were willing to put him in another place. The old man steadily refused to move. The march of progress meant little to him! he had stayed in that little cottage all his life, it was all he knew. They moved him to a much more comfortable place, but he was not satisfied. They asked him if there was anything more they could do for him, and he said "Yes, go back to the little cottage, and bring me some of the fire. That fire has not been out since my grandfather brought my grandmother there, and later my father brought my mother there. It has been going continuously all these years." Now that is the kind of love of home that you get from the farm life. We believe it is worth while to protect the farm home, to insure the permanency of agriculture as an industry.

Does it ever occur to you that the time may come when you may not be living upon these beautiful old farms that you have here in Maryland, that we in Indiana may have to change? It may be necessary, in order to carry out that program of soil conservation. So much was said about that in our National meeting. Mr. Babcock's article in the Country Gentleman, a summary of the talk he gave to us at the National meeting is very good. I commend it to you. It is on this matter of soil conserva-

tion. We heard this morning how important it was to have the bumble bees, to have the red clover, the more bumble bees the more red clover. I was very much interested.

I was also interested in President Weagly's talk about the taxation problems here in Maryland. I want to say to this audience what it has been my pleasure to say to audiences all over the country. I want to speak of the great stake the American women have in these matters of taxation. Do you know that women own three-fourths of the national wealth; women have control of 60% of the bank deposits; 40% of the farms; women are beneficiaries of 80% of the life insurance policies; 44% of the utilities; 48% of the railway stock? It seems to me with all of that tremendous force in the hands of the women that they have a great stake in these taxation problems. They took their part in the sale of Victory and War bonds. I am sure those women made a sacrifice first to buy and then to hold those bonds. So they have that much of a stake in the well-being of the nation. I am sure they will exercise the same kind of economy in the spending of money as they have done in buying the bonds.

Then, they are interested in the great matter of insurance, that program of insurance on the farm. I know my farm is insured. You know I am a farmer as well as a farm woman, so you may see that I have a real interest in this program.

I have a great deal of respect for the women—what they have done in the way of economy, in making something out of nothing, using the feed bags to make clothes for their small children, but, oh! I just do not like to think that they have to do it. Down in Tennessee a man told me of a cotton farmer having such a hard time, that his wife had had to clothe the little boy from the feed bags. One day the farmer was going to town and his mother told the little boy he might go along. That day, pleased that he had been such a good boy, his father told him he might go in the store and buy a store-bought shirt. The little boy really felt out of place in the store, he was not very tall, but he stood his ground, and he said "Please, Miss, I would like to see one of your store-bought shirts." She said "What size?" Well, he did not know what to say to that, but he pulled out the tail of the shirt he had on, and found the tag from the feed bag, and he said "Size 4-8-4." I say it was a fine thing for that woman to clothe her little boy in the feed bags if she had to do it, but I do say it was not all right that such a situation should arise that made it necessary for her to do it.

Now, I want to say something about this matter of parity—asking the American farmer to take 90% of parity. What we want is just equality and justice. I have been wondering when they ask the farmer to take 90% of parity, if it would not even this thing up if they were to ask industry and labor to also take 90% of parity. I believe it would.

The next place where the farm woman has a great deal of responsibility is in the field of public relations. In the meeting which was held over in Washington last winter, when the farm organizations entertained British visitors, I attended the breakfast given. During the discussion, P. O. Davis, of Alabama asked the question "What was to be the program of the British farmers after the end of the year?" The answer was that they expected to teach the consuming public that they cannot expect cheap food any longer. P. O. asked "How do you propose to do that?" "We do not propose to let it happen. We will tell the British housewife she cannot afford to make cheap food at the expense of the British farmers." That is something to take back to the farm people.

Then, we have the subject of rural electrification. I could not help but admire the figures given today about the electrification of Maryland. I wish I could see that proportion reflected all over the United States. That would give employment for industry and labor all over the country, installing that electricity. Do you know that, according to the figures given us, 88% of our farm homes have no bath rooms; 82% no running water; 60% no electrification; 40% no radios. Think of the army of men and women that it would take to provide those needs. That would take care of that mass of unemployed.

A home agent down in Tennessee last summer, a member of the Extension Service, was telling me of a trip she took one very cold morning last January in her little car. She was dressed nice and warm, she looked like a picture. When she went to see one mountain woman, the woman kept looking at her, and finally she said "My, you are awfully pretty. I bet you are not married." The girl said, "Why do you say that?" The woman said, "It fades you, it wears you down."

The American farmer owes a debt to his organization. This afternoon we do not face the future as our forefathers did, nor as we did in 1918. Look back with me this afternoon to that time when we did not have our great National organization. Realize what you owe to it. I have a little friend in the hotel Sherman whom I have learned to know from staying there. One Sunday morning she was telling me about her Union, her organization. I asked her, "Katie, what are your dues?" She said, "Well, from January to June I pay \$3.00 a month; the rest of the year, \$2.00 a month." That is \$30.00 a year for her Union dues. Our people feel that they are doing a great deal when they pay \$5.00. How about \$15.00 dues? Think that over. Think whether or not you are giving enough for what you are getting.

We work very closely with the Agricultural Department, with the Committee from the Senate and House of Representatives. I am reminded of the woman who was asked to make a regular speech to her representatives and she said, "I do not know much about talking to a group. I would rather talk to them one at a time, and then I can talk to that one like I do to my own old man."

I could talk a long time about what you owe to your community in the matter of education, to your church, and so on, but I shall not take the time. However, I will say something about the matter of health, about the necessity of a program in some of our farm communities for medical care. We should have health insurance and hospital insurance, just as well as fire insurance. I believe you and I can make a real contribution, a good account of our stewardship, if we promote this campaign for health insurance.

In summarizing, I am sure you will agree with me as we look towards the peace that we as farm people should think a little more about bringing the farm homes up to a standard where they will be better places to live. We do not need so many new laws for that. I was reading about 1,110 new Bills in your State Legislature, and I thought of what Will Rogers said about all that would be needed might be written on a post-card, all we would need was just to follow the ten commandments. We all have to consider the control of the atom bomb, the compulsory military training and all that. We must be more optimistic. The resources of this great country are yet untouched. There is so much we can do for our great agricultural industry. Senator Bailey, of South Carolina, was talking about an old colored Baptist minister down in his section. He asked him "How many members in your church?" "Fifty." "How many of them are active?" "All active, twenty-five for me and twenty-five against me." We do not want that situation. As we come to this new year with its greatly increased responsibilities, we must learn to help our neighbors and help to promote the American farmer.

When Jim Howard was head of the first Farm Bureau, at the close of World War I, he was called to represent us before a group of labor and industry. I remember one of the things he spoke of—the cadence of the working man. He was speaking of that day when we were not using mechanical corn pickers, the farmer in the west going out before it was light, going to the barn to feed the livestock, harnessing them up, going out to pick corn. The woman in the house hearing the sounds, knew when they had reached the field—it was so dark. Today we have another farm, another field, a new form of farming. Mr. Howard said to that group of men: The American farmer is out here today. It is very dark, he is trying to work in the dark, he has not stopped in his job. He is calling on you in the other fields of industry and labor. "Get busy, do your work and let's all face the peace."

MR. WEAGLY: Our next speaker comes from the same State as Mrs. Sewell. He has a very successful record in the Farm Bureau. He started farming in 1919. He was President of his own County Farm Bureau, and elected to the Indiana Farm Bureau in December, 1936. He was runner-up for the Vice-Presidency of the American Farm Bureau. I am sorry Mr. Schenck made no effort to get support for himself. His thought was that farm leaders should not seek the job, that the job should seek them. Mr. Hassil E. Schenck will now give us a talk.

AGRICULTURE FACES THE FUTURE

HASSIL E. SCHENCK

Now, folks, it is a great privilege that I can come from the Middle West out here to meet you Maryland people. I feel like I owe a lot to the State of Maryland. My first visit was here in this room when you were in annual convention. Since that time I have had the privilege of meeting a number of your great people, Dr. Symons, Roy Weagly, Ed Wise, Phil Turner, Harry Nuttle, and then Mrs. Weagly who occupies the limelight now. You have heard the Sweetheart of the Farm Bureau, Mrs. Sewell, and Mrs. Weagly stands beside her as one of the first two ladies in American agriculture, and that may be a way of repaying a debt for the many good things that have come our way from the State of Maryland, also for that reason I am glad to be here this afternoon.

Some of the things Mrs. Sewell said make me want to talk about our own Indiana Farm Bureau. I will only say in passing that we have reached out pretty far in rendering service to our Indiana farm people. We have entered the fields of production from a producer's standpoint unequalled anywhere. We have been in the field of marketing our own grain, our wool, our dairy products, we have cooperatives in the field of insurance, we have two great, substantial insurance companies, and right at this moment are building another one to render a service to Indiana farm people. We have our own printing presses, our own anti-cholera serum plant, the only one under Government service, one of two east of the Mississippi.

In conjunction with our grain marketing, we have a terminal in the suburbs of Indianapolis, 6,000 ton terminal, and one in Louisville, Ky., and we are paying for those terminals. On the average, it only takes three years to pay for a terminal, and then they belong to the farmers instead of belonging to the other fellow. In the matter of our cooperatives, we found it necessary to go into many fields of industrial endeavor. Many of my friends in industry protest that we have no business in getting into the field of industry, but I can tell you we farmers have gotten into those fields—especially in the matter of petroleum and gasoline. I remember when we started distributing gasoline to our farmers; there was 7 cents margin in the distribution of gasoline, and we found we could distribute it and did distribute it for a 3-cent margin. That was quite a saving for the farmers.

We own our own oil fields, many of them outside of the State, our own refinery, and if I were to tell you how quick that refinery paid for itself you would not believe it.

We own our own fertilizer factories, our own feed mills, our own mills, and all of the earnings and savings drop back into the pockets of the farmers of the State of Indiana, and mark this down as to taxes. We pay every property tax, our excise tax. Many are paying the Federal

income tax also. They do not retain those savings within the corporation. They go back into the hands of the farmers who helped to make them a success. We are not going to help in the exploitation of the common man in order to bring all of the earnings into the pockets of a few. We want the earning power in the hands of all the people.

Now, I am not going to tell any more about Indiana. Mrs. Sewell told you about the women controlling the wealth of America. I agree with that down to the individual farm home. I am going to tell you how my lovely wife and I have learned to get along with each other and with other American people. I will pass that on to you men here today. When Mrs. Schenck and I were married, we agreed upon how to get on with each other—and don't ask me if we have had any quarrels—we agreed that up until noon every day she would do as she pleased, and then from noon on the rest of the day I would do as she pleases. Now, you can take that home and practice it. We get along fine.

My subject this afternoon is "Agriculture Faces the Future."

I was at a meeting where one of the business men speaking of the troubles of industry, summed them up under two heads, Labor and Taxes. If he could just solve the labor problems, the taxes would take care of themselves. I think I can tie that up with my own subject—"Agriculture Faces the Future." I have looked over the charts from the inception of this nation, up and down and up and down, and those ups and downs followed agriculture's income. There are those who will have you believe that if the other fellow gets prosperous naturally the farmer will. From 1920 to 1929, industry prospered and agriculture suffered, and finally agriculture dragged the other fellow down to its average. When this gentleman said that all the troubles of industry came under two heads, taxes and labor, I arose to my feet and told them—"You can give labor all it wants, and raise the taxing power in order to have prosperity, but if you destroy the purchasing power of agriculture, in a few years industry will be closing its door." I mean that. I do not mean that we have not a great stake in industry and labor.

The purchasing power of the laboring man is vital to us, but notwithstanding labor, if you destroy the purchasing power of the American farmer, industry will fall. Witness the years 1929 to 1933—which came first, the hen or the egg—it does not make much difference to me because they both came from the farm. I can say this to the leaders of industry and labor—destroy every industry in America and keep the farmers, and in five years you will see a prosperous industry, if those farmers are enjoying a degree of prosperity; but destroy the farmers of America and keep the industries and in five years there will be no industry in America.

America Faces the Future—right now we are on the threshold of a new era in our national and in all likelihood our world history. What happens in the next decade, and perhaps even in the next three or four

years will, in my opinion, decide whether America and the world for the next century to come will survive. We are in a position, gentlemen, to have something to say about that. Twenty-seven years ago we were again on the threshold of a new era, but we did not have a great farm organization, we were not in a position to meet the problems that were right on our own doorsteps. Now we do have a great farm organization and I think the success of our organization will be measured by the way we meet the issues before us in the near future.

We are prone to feel we have reached the peak of our endeavor. We have not, ladies and gentlemen. I repeat that in my humble opinion the next decade will unfold great opportunities, opportunities that we may not even have dreamed of. When I was in South America, I saw men working in the fields, harvesting their crops, we seemed years ahead of them in the States, but we are just a step away. To prove that I can go back to the days of Ruth, for generations and generations we clung to the harvesting methods of the days of Ruth. Until some one found a much more modern method of harvesting grain it was harvested by the cradle, and I am going to venture the statement that there are men and women in this audience who have seen the cradle in operation as a means of harvesting the grain. If there are, hold up your hands! (Many held up their hands). Now, I am going to venture one more statement—that there are men here who have actually used the cradle as a means of harvesting the grain. (Again several held up their hands). I see quite a few octogenarians here—I really do not know what the word means.

Today you have heard about hybrids. I am for the hybrids. Last year Indiana exceeded in hybrids. When hybrids are really developed, we will be able to make 100 bushels of corn to the acre.

At the National meeting, we were told about the matter of soil conservation—that there were only nine inches of top soil and today there are only six inches. You know where the rest of it has gone—in America down to the Gulf of Mexico, never to be returned, but I believe the next decade is going to unfold methods in soil conservation and soil building. There will be new methods of livestock breeding and the care of livestock.

As we look to the future, we will see tremendous changes in America. Not long ago, September 17th, we commemorated the anniversary of the signing of the Constitution. I made a speech on that date. A lot of people all over the nation made speeches that date. One man, a leader of a great movement, with which I disagree—that man in his speech mentioned—I venture three-fourths of you would know of whom I am now talking—that in five years from now America would be the only nation of free enterprise in all the world, and implied that when that time came America would be out of step, and we would have to get in step with the other nations. I do not share his views.

Russia is a Communistic nation. If Russian wants to be Communistic,

God bless her—that is her privilege, if that is what she wants. But Russia admits that had it not been for Uncle Sam, and our boys and young women, our money, our clothing and munitions of war, Russia would have been a crushed nation today. It has not been very long since England had an election, and in that election England swung far to the left. I say if they want a Socialistic form of government that is England's privilege. But, they will admit that had it not been for Uncle Sam, England would be a crushed nation today. So, when any man who claims citizenship in America today tells me that we who saved the last remnants of democracy should follow those whom we had to rescue, ladies and gentlemen, I cannot share that man's views. That is the problem we farmers have to meet today.

Do you remember, back in World War I when you could not get this or that, you said the time would never come when that would occur again. You lived pretty well during World War II compared with the first World War, but there were a lot of things you could not get. You could not get gasoline, you could not get tires. There never was a time in World War II when you could not go in any store at any time and get some flour. You remember how it was in World War I. We had to use rice, barley, or anything we could get. I was making a talk along that line in Kansas, which is a great wheat-producing State. A man came to me when I sat down, the President of the Kansas Farm Bureau, and he said, "Schenck, right here in the greatest wheat producing farms in all the world, at one time we could not get flour. We had to use substitutes just the same as the rest of the world." Then, afterwards wheat went down, hit a bottom of 32 cents a bushel. Some farmers were trying to pay for farms that they bought when wheat was at \$2.25 a bushel. Wheat could hardly be given away. The Chinese Government threw a lot of wheat back on us, would not even accept a gift of wheat, in order to protect their rice, as they were a rice-producing country. That was the condition after World War I.

Six years ago there was an excess of fruits in America, excess of all foods so that they hardly brought the cost of raising them. That will not happen again, if we just get the membership we want to control the prices. A lot of you men and women want to go back to normal times. We are not going back to those normal times. Some of these days we will have a new normal, on a new plan, instead of going back we will go forward to a better normal time. We cannot think of normal times as they were ten years ago.

We will have just as much power, as much force, as much influence as we have membership. You have 10,000, and I commend you for it, but I believe you can do better than that. We want intelligent farmers, we have the scientists to lead us. There has not been enough intelligence among farmers to meet our problems. We farmers must realize the importance of industry and labor; labor must realize the importance of

industry and agriculture; and industry must realize the importance of labor and agriculture. We will then move forward together in a great movement, and the success of our nation will depend upon how successfully we do that.

I was indeed glad to spend these few minutes with you good people, and I want to thank you.

The meeting then adjourned.

BUSINESS SESSION

FRIDAY, JANUARY 11, 1946

R. C. F. WEAGLY, *Chairman*

MR. WEAGLY: The annual business meeting of the Maryland Farm Bureau is now in session.

We will now have the roll call.

The roll call of voting delegates was read by Mr. Wilson Heaps.

Allegany Co.: Harry Barton, Charles Harvey, F. B. Cosgrove; *Anne Arundel:* O. F. Grimes, Sr., Frances E. Gardiner, Darrell Sansbury, Mrs. Eva Leitch, Mrs. Albert Taylor, J. John Jones, Mrs. Frank West, Albert Taylor; *Baltimore:* F. Ridgely Todd, G. H. Hibberd, J. Frank Lupo, Lawrence E. Ensor, W. W. Boyce, T. A. Mann, P. C. Turner, Dr. R. W. Shermantine, Daniel S. Pearce, E. Ross Pearce, John E. Merryman, D. Paul Gore, George F. Scheeler, Elmer Koppelman, George J. Kreit, Fred Wilson; *Calvert:* John C. Ward, A. Claude Turner, E. A. Miller, Douglas Parran, Estep Watson, Calvert Buckler; *Caroline:* C. J. Kern, L. C. Bradley, Harold L. Clark, F. D. Zeigler, Melvin Blades, Frederick Wright, Richard Blackburn, Wilbert Merriken, Boone Jarrell, Lee Murphy, Theodore Schmick; *Carroll:* C. Jesse Hull, Randall Spoerlein, Herman Baile, Earl Beard, John S. Bushey, Irvin Flickinger, John Hersh, John D. Young, George B. John, Sterling Little, Vernon A. Mathias, Stuart King, W. Roger Roop, Mrs. Edgar Sellers, Mrs. Arthur Shipley, R. G. Spoerlein, Guernsey Stuller; *Cecil:* D. B. McDowell, R. G. MacDonald, Lloyd Balderson, Robert H. Baker; *Charles:* Walter W. Bowling, Mrs. X. W. Garner, S. C. Linton, Joseph Gruss, John Cooksey, Eloise Gardiner, X. W. Garner, Robert Martin, Leonard Keller, Mrs. P. D. Brown, W. F. Metcalfe, Arnold Welch, McCarthy Greer; *Dorchester:* S. W. Linthicum, Milton Malkus, Jr., Earle R. Keene, Walter Lankford, Reginald A. Jones, A. K. Austin, A. R. Peterson, Guy R. Phillips; *Frederick:* James E. Ferrell, T. S. Anderson, J. D. Stup, G. Foster Angleberger, I. L. Davis, William E. Clark, J. Dorsey Gaither, W. Ivan Harshman, Charles W. Bollinger, W. L. Wachter, Russell Z. Horman, Z. U. Firor, Jacob B. Young, L. H. Ramsburg, Garnett C. Ball, William Snyder, Ira Ifert, Gilmore Hamilton, E. Earl Haifleigh, Edgar C. Virts, H. U. Quinn, Edward F. Holter, Leslie C. Brandenburg; *Garrett:*

William Winterberg, L. M. Harman, Marvin Callis, Harry W. Hummel, Ross Speicher; *Harford*: Wilson Heaps, A. G. Ensor, Karl C. Ascherfeld, Edmund Scarborough, Earl Hawson, Mrs. Russell Scarborough, Arthur Hopkins, T. Roy Brookes, J. Rush Baldwin, W. Roy Tucker, John M. Spicer, Ross Scarff, John W. Bay, Howard W. Turner, Roy Baldwin, Dr. Herbert Hoopes, Andrew H. Lohr, Frank Adams; *Howard*: J. W. Lord, William Brendel, French Fugate, Mrs. Beatrice Cissell, Cashell Nichols, Vernon Bandel, Hugh Hill, G. Thomas Clark; *Kent*: Howard Leaverton, H. S. Ford, Walter H. Haddaway, Clem A. Davidson, Harvey Freeman, Mrs. Walter Haddaway, Ralph P. Williams, Harry T. Williams, B. F. Rash; *Montgomery*: James D. King, Mrs. Edwin D. Fry, Allie Messer, Osbourn Stabler, Charles Davis, G. R. Canby, Ralph Walker, T. B. Dorsett, Edwin Fry, Wilson Poole, William Pyles, Mrs. William Pyles; *Prince Georges*: H. C. Townshend, J. P. Able, Leon Jones, Clement H. Tydings, R. W. Smith, Leon Joyce, G. S. Oursler, E. L. Baden, W. D. Addison; *Queen Annes*: John W. Smith, Norman Walls, Bernard Appleford, J. H. Carter, George Welsh, Howard Welsh, John Rhynhalt, J. Herbert Carter; *St. Marys*: F. D. Hayden, J. R. Drury, J. M. Cooper, Mrs. Marie Coleman, Joseph M. Mattingly, William E. Raley, J. F. Adams; *Somerset*: Harry Keenan, W. C. Hayman, Robert L. Chamberlin, George F. Maddox, Mrs. Mary Keenan, James A. Gottman, J. Miles Lankford; *Talbot*: Francis A. Schwaninger, A. H. Spies, T. C. Schwaninger, Graham D. Price, Hans Asmussen, William H. Bringman, Otto A. Sanger; *Washington*: D. E. Rinehart, Harry Toms, Walter Bromley, Leo Cohill, Herman Stockslager, Stanley Haynes, W. H. Hovermale, Silas Petre, Richard Seibert, Francis Stockslager, Jacob Ankeney, Richard Stouffer; *Wicomico*: C. C. Phillips, Max Hammond, Harold White, Merrell Cathell, Harry Banks, Samuel J. Disharoon, Paul Reddish, Dean W. Richardson, Parker Banks, Robert A. Dennis, Jay French, Clarence Morris, Earnest Venables, John Parker; *Worcester*: Letcher L. Colona, Thomas Cropper, S. E. Shockley, W. P. Evans, S. D. Corbin, Carl Dryden, William M. Cropper, James Parsons; *Associated Women*: Mrs. C. J. Kern, Mrs. Randall Spoerlein, Mrs. Howard Remsburg, Mrs. Harvey Hill, Mrs. Atlee Armour, Mrs. Forde Adams, Mrs. Edgar Williams, Mrs. Frank West; *Md. Co-op. Milk Producers, Inc.*: R. W. Shermantine, D. G. Harry, Jess K. Kerr, Webster Bosley; *Md. Horse Breeders Assn.*: Joseph F. Flannagan, Louis McL. Merryman; *Md. State Horticultural Society*: Marshall T. Heaps, E. D. McCain; *Md. State Poultry Council*: John W. Snoddy, Mrs. H. T. Williams; *Md. Stockmen's Assn.*: J. Herbert Snyder, John E. Muncaster; *Md. Tobacco Growers Assn.*: J. E. McCue, Walter W. Stewart, S. C. Linton, Joseph H. Mitchell; *Md. Nurserymen's Assn.*: L. H. Willis, W. D. Reed; *Md. Vegetable Growers Assn.*: Ridgely Todd, S. H. Rayner; *Southern States Hillsboro-Queen Anne Marketing Co-op., Inc.*: Charles I. Boyle; *Md. Crop Improvement Assn.*: J. Charles Rutledge, Cecil K. Holter.

MR. WEAGLY: The Secretary will read the call for the meeting.

Mr. Wise read the call.

December 19, 1945

TO COUNTY SECRETARIES AND AFFILIATE
AND ASSOCIATE SECRETARIES

Notice of Annual Meeting of Members of
Maryland Farm Bureau, Inc.

Dear Sir:

Official notice is hereby given you that the Board of Directors of the Maryland Farm Bureau, Inc., has authorized the calling of the next annual meeting of the Corporation for January 10 and 11, 1946, Lord Baltimore Hotel, Baltimore, Md.; the meeting to continue from day to day until all business that may come before the meeting has been properly disposed of. All sessions of the annual meeting will be held in the Ballroom of the Lord Baltimore Hotel.

Blanks are enclosed for you to submit the credentials of your directors and delegates for this meeting.

Very truly yours,

C. E. WISE, JR.,
Secty.-Treasurer.

MR. WEAGLY: Next we will have the reading of the minutes of last year's meeting by Mr. Wise.

Mr. Wise read the minutes of the Annual meeting January 12, 1945. Mr. Townshend moved they be adopted as read, and Mr. Hull seconded the motion and it was carried.

MR. WEAGLY: Next we will have the report of the Audit Committee. The report of the Audit Committee was read, and Mr. Collins moved it be accepted as read. Mr. Linton seconded the motion and it was carried.

January 8, 1946

Mr. President:

Your auditing committee has discussed the financial report with William R. Dance, Auditor, and after careful examination find same correct.

The Maryland Farm Bureau is in sound financial condition; all bills for 1945 have been paid.

We, the auditing committee, wish to commend the management of the office on the efficiency they have shown in this year's operations.

Respectfully submitted,

LETCHER COLONA, *Chairman*
JESSE HULL
HARRY BARTON
JAMES D. KING
WALTER BOWLING

MR. WEAGLY: Next we will have the Treasurer's Report.

Mr. Wise read the Treasurer's report and copies were handed around. Mr. King moved its acceptance. Mr. Schwaninger seconded the motion and it was carried.

MR. WEAGLY: Next we will have the report of the membership committee. Mr. Smith gave the report of the membership committee (report attached).

REPORT OF MEMBERSHIP COMMITTEE

1. Quota of 11,497 members in 1946.
2. Recommend a program of activity in every County to maintain present and secure future goals in membership.
3. Urge the formation of additional planning groups throughout the State and suggest that the Associated Women take the initiative in this department.
4. We urge early membership work to avoid various complications that confronted those Counties that were late starting their campaigns in 1945.
5. We request a well-organized campaign in every County between February 1st and April 1st, 1946. This campaign should insure a complete coverage of all farmers. It should include an Information Program, use of renewal envelopes, *personal* letter from County President, and personal contact.

County	1945 Membership	1946 State Quota	1946	
			National Contest Quota	Potential Membership
Allegany	255	285	315	849
Anne Arundel	364	395	426	980
Baltimore	790	888	986	2743
Calvert	229	245	261	541
Caroline	552	616	680	1190
Carroll	760	841	921	2371
Cecil	138	175	222	1078
Charles	596	601	606	689
Dorchester	327	358	388	935
Frederick	1030	1155	1180	2526
Garrett	251	316	381	1551
Harford	770	819	967	1637
Howard	365	383	401	719
Kent	410	419	428	589
Montgomery	541	584	626	1390
Prince George's....	461	501	540	1248
Queen Anne's	306	331	356	799
St. Mary's	290	317	344	827
Somerset	329	348	367	703
Talbot	291	311	331	690
Washington	532	600	668	1882
Wicomico	664	703	742	1437
Worcester	263	306	348	1106
	10,514	11,497	12,484	28,544

January 2, 1946

MEMBERSHIP REPORT

3 Yr. Average	Memberships Recv'd in 1945	Numerical Increase	Percentage Increase
204	Allegany 255	51	25
330	Anne Arundel 364	34	10
680	Baltimore 790	110	16
204	Calvert 229	25	12
423	Caroline 552	29	7
627	Carroll 760	133	21
133	Cecil 138	5	4
401	Charles 596	195	49
218	Dorchester 327	109	50
917	Frederick 1030	113	12
208	Garrett 251	43	20
605	Harford 770	165	27
285	Howard 365	80	28
342	Kent 410	68	20
453	Montgomery 541	88	20
338	Prince George's 461	123	37
273	Queen Anne's 306	33	11
236	St. Mary's 290	54	22
242	Somerset 329	87	36
229	Talbot 291	62	27
457	Washington 532	75	16
560	Wicomico 664	104	29
207	Worcester 263	56	27
Total		10,514	

MR. WEAGLY: Next we will have the report of the Resolution Committee by Mr. Leaverton, Chairman.

MR. LEAVERTON: The Resolutions Committee wishes to submit the following resolutions for the approval of this delegate body:

(As Mr. Leaverton read each resolution, he moved its acceptance, it was seconded and carried.)

RESOLUTIONS, 1946

MARYLAND FARM BUREAU, INC.

Foreword

Four years ago Maryland farmers dedicated themselves to the task of war. To strive unrelentlessly for victory on both the battle and home front.

Unconditional surrender has ended formal war, but has not brought peace. Our pride of achievement is tempered by the demands of a greater job that is America's—leading the world to peace.

The brave young people who went forth from our farms and our cities fought for freedom, security and a better world. For those who made the

supreme sacrifice, those who fought and lived and those who labored at home, no greater honor can be had and no greater heritage to posterity be left than a united effort by all groups in America to devote themselves to the cause of freedom, security and peace for the world.

To this end we here dedicate ourselves with greater zeal and determination to the unfinished tasks that lie ahead.

Crop Insurance

1. We reaffirm our belief in the principle of federal all-risk crop insurance on a self-sustaining basis. Basing our opinion on trial corn insurance, we believe some changes are necessary to make the insurance program more successful. We are in sympathy with the actions of the special state committee which has been set up by farm organizations to study this important question so that our representatives in Congress may be advised as to the attitude of our farmers in this matter.

Soil Conservation

2. Having supported the inauguration of soil conservation work in the State and the passage of the Soil Districts Law in 1937, the State Farm Bureau wishes to commend our authorities and State Board of Agriculture, in cooperation with the U. S. Soil Conservation Service, for the splendid progress being made. We wish to commend the Board of Governors for the increase in support of this work by the last State budget and urge that increased funds be made available in the future to assist the Soil Conservation Districts in the promotion of this important work. We also urge our representatives in Congress to provide adequately for the U. S. Soil Conservation Service and maintain its identity in the U. S. Department of Agriculture.

Federal Income Tax Returns

3. Farmers are handicapped in making their Federal income tax returns by a lack of Forms 1040-F they are required to use with their regular return. We believe that a single form for farmers can be developed to simplify this task.

We urge that the Treasury Department take steps at once to make Forms 1040-F available to farmers. We also request the forms now used by farmers be simplified and a single form be prepared for farm income tax returns.

State Taxation

4. The report of the Grange-Farm Bureau Tax Committee covers the Maryland revenue system from county assessments to the income tax returns. The Federal Road Program, the status of county roads and their financing and a discussion of the Social Security Program are also included.

We adopt this report and urge our members to study the contents. We also urge our State officials to restore the state income tax rates to 2% and 5% so that an adequate state surplus may be built up during prosperous years to insure governmental functions in years of business depression.

Farm Labor

5. An adequate manpower on farms is the most vital factor in the continued high production of food that is so necessary for our civilian population and war-torn nations abroad.

Despite wartime shortages of farm labor, equipment and supplies of all kinds, farmers responded patriotically with long and arduous hours of labor to the nation's call for greater food production. The splendid manner in which farm labor contributed greatly to the large wartime production of food is recognized.

Wartime shortages will continue in 1946. Due in large part to serious labor-management strife, critical shortages of labor-saving farm machinery are continuing. The farm labor situation seems likely to be even more critical. Former farm workers released from war plants and the armed services are not returning to the farms, and the exodus of labor from farms due to the relaxation of manpower controls and the return of war prisoners and imported workers to their homeland is actually resulting in a greater shortage of farm labor than in any previous year.

Therefore, we recommend that—

1. All possible sources of domestic farm labor be mobilized and supplemented with as many imported workers as possible.
2. Continuing surveys and studies be made by the University of Maryland, of sources of domestic labor, including southern migrants, displaced war workers and returning veterans.
3. Greatest possible exchange of labor and labor-saving machinery between farms be stimulated, together with improved timeliness of farm operations and labor-saving techniques of all kinds.
4. Appropriate measures be taken to assure the availability of the maximum amount of new labor-saving farm machinery for purchase by farmers.
5. Cooperation in every possible way be given to the U. S. Employment Service in providing adequate labor for canning factories and improving methods of referring unemployed industrial workers to farm jobs.
6. Every possible safeguard be taken in the administration of laws pertaining to unemployment compensation so as to stimulate a return to farms of former farm workers in war plants.
7. Equitable prices for farm products be assured so that farmers can compete with industry for labor.
3. As a means of attracting and holding labor on farms, every effort be made by individual farmers to improve the attractiveness of the farm job, including the improvement in housing facilities and con-

veniences for farm workers and relations between employers and employees.

9. National farm organizations and our representatives and senators in Congress be commended for their successful efforts in obtaining a continuation of appropriations for the farm labor program, and the efforts of all agencies and organizations who have cooperated in the farm labor problem be commended.
10. A national commission of agricultural leaders be appointed by the President to study the needs and recommend a plan for a long-time labor program beyond 1946.

Labor Relations

6. The national interest, including that of agriculture, requires a rapid conversion of industry to a peacetime basis, and to full employment and an abundant production.

Economic stability in the postwar years is a solemn responsibility of all American citizens. It can only be achieved through a recognition by agriculture, industry and labor of the rights of others and of their mutual interdependence.

However, the growing strife between industrial labor and management, including strikes in the automotive and other industries and the impending strike in the steel industry, not only jeopardizes the reconversion and full employment programs, but also is a serious threat to the maintenance of our economic stability, and, in fact, to the very foundation of our industrial structure and of our form of government.

To maintain a stable national economy, the fundamental rights and interests of industry, labor and agriculture must be maintained. Agriculture should provide an adequate supply of food and fibre. Industry must pay a fair wage and maintain proper working conditions for its labor. Labor must be made to respect its responsibilities and to clean its house of racketeering leaders and practices.

Therefore, we support the Hobbs Anti-Racketeering Bill and favor additional legislation that will curb other abuses of organized labor without infringing on legitimate union activities.

Six-Day Producer Markets

7. Six million farm families are producing food for the 130 million people in the United States today. With more and more farm products going to the consumer in fresh form, their quality and dollar value depend to a large extent upon the speed with which they reach the market. Moreover, the war re-emphasized the vital importance of eliminating waste in handling food.

To be prosperous, agriculture must have a good market for fresh foods. For this, it is imperative that farmers have a ready market six days a

week and that there be no obstruction of farm produce trucks headed for market. Delays mean deterioration and waste.

Certain labor unions have joined with commission men in produce markets in many northeastern cities to operate on a five-day per week basis, thereby costing the producer, through spoilage and deterioration, hundreds of thousands of dollars.

We will support vigorously the efforts of the Food Producers' Council to re-establish these markets on a six-day basis and, by legislation, stop all forms of racketeering.

Surplus Property Disposal

8. We are aware of the problems involved in the disposition of the huge quantities of surplus property. The delay encountered by the public in the acquisition of surplus property, even today, over a year after the enactment of the Surplus Property Act, is indefensible.

We insist that there be made immediately available to the public a clarification of the rules and regulations of the Surplus Property Act and disclosure of its plans for carrying out the intent of the Congress. Steps should be taken at once to effectuate the provisions of law in providing for sales in rural areas in such manner as will assure Farmers and Farmers' Cooperative Associations an equal opportunity with others to purchase surplus property.

Artificial Insemination

9. Inasmuch as the organization of the Artificial Breeding Cooperative has been completed, all bull selection committees appointed, and plans fully completed for operation of county units, we most urgently request facilities planned at the University of Maryland in connection with the project be provided at once in order that the program may be ready to function as planned for April 1, 1946.

Commodity Committees

10. We endorse the action taken by the Board of Directors of the Maryland Farm Bureau, Inc., in appointing Commodity Committees for Fruits and Vegetables, Dairy, Livestock and Poultry.

These committees should be of great help to the farmers of Maryland.

Market Facilities in Baltimore

11. The General Assembly of 1945 passed an Act authorizing the appointment of an eleven-man commission to continue the study of the antiquated facilities on the Baltimore Wholesale Produce Markets. This commission has not been appointed and valuable time has been lost on this important farm problem. We urge Governor O'Connor to appoint this commission without further delay.

Farm Machinery and Better Housing

12. There is tremendous need for new farm machinery to meet production demands of 1946 and the farm labor outlook is as serious as it has been during the war period. There is great need for improvement of farm buildings, farm homes and better housing for farm labor.

The Maryland Farm Bureau urges our national authorities to encourage the production of farm machinery in every way, through priorities and otherwise, and to use every legitimate means to reduce labor strikes for factories producing such farm machinery.

We believe that every effort should be made to make available supplies for improvement of farm buildings and homes, and especially urge our membership to give serious attention toward improvement of housing and living conditions for farm labor.

State Fair and Community Exhibit Funds

13. We commend the State Fair Board and Maryland Agricultural Society for their assistance and financial support to State Fair and Community Educational Exhibits and urge the General Assembly to provide an increase in appropriations for this very important work.

Farm Credit

14. The Farm Credit Administration has served agriculture well in financing land purchases, farm operations and cooperative activities. We recommend that all governmental agencies offering loans to agriculture be coordinated under the Farm Credit Administration in the interest of economy and efficiency.

Rural Youth

15. We realize that our youth on the farms today will be the farmers of tomorrow. We feel that in the interest of a better agriculture in Maryland they should be acquainted with the problems and encouraged to assist in their solution.

We urge a more aggressive program by the Maryland Farm Bureau and each of the Counties giving rural youth more opportunity to participate in organized Maryland agriculture.

Funds for Agricultural Research

16. The costs of conducting agricultural research have increased greatly in recent years in keeping with increased costs of other services. These increased costs without a corresponding increase in appropriations have necessitated a sharp reduction in research that can be financed from federal funds at state agricultural experiment stations.

It is the belief of the Maryland Farm Bureau that a substantial percentage of the appropriations for research under the National Research Foundation, as presented in the Kilgore-Magnuson Bill now pending before Congress, be ear-marked for agricultural research at the experiment stations of the several states or that a corresponding sum of money be made available through other legislation for use at these stations.

Government on a Pay-As-You-Go Basis

17. Our national debt now approximates \$300,000,000,000, a sum nearly equal to the total wealth of our nation. This financial situation calls for careful management of our national finances and the curtailment of expenses.

We urge our Congressmen and Senators to initiate and back a fiscal program for the Federal Government that will balance the budget and start the reduction of the national debt.

Cooperatives

18. Agricultural cooperatives are the farmers' strongest asset in the economic struggle. They are the means by which the farmers, large and small, pool their purchases and their sales to compete in an economy of big business and big government.

Service to members in the quality of goods sold are the real benefits to farmers. We urge our cooperatives to stress and improve the services rendered farmers to increase their efficiency.

We shall back all cooperatives serving farmers and will oppose the efforts of the National Tax Equality Association to tax patronage refunds and thereby destroy the effectiveness of farmers' cooperatives.

Air Transportation

19. In the post-war period all methods of transportation will need to develop their services and adjust their rates in keeping with the reconversion period. Transportation by air in the post-war period will assume an economic importance to agriculture and to the nation as a whole far beyond that which existed prior to World War II.

The Maryland Farm Bureau should appoint a Committee to confer with the State Aviation Commission to study the development of this important system of transportation in Maryland in relation to agriculture.

Subsidies

20. It is proposed that present subsidies on milk and other agricultural products are likely to be dropped in a comparatively short time. The State Farm Bureau is generally opposed to such subsidies in lieu of fair prices but would vigorously oppose removal of such subsidies until fair price increases are secured.

We urge our Governmental Authorities to provide for price increases on the market comparable to amounts deducted by such subsidies on all agricultural products effected.

Old Age and Survivors' Insurance Benefits

21. We endorse the resolution of the American Farm Bureau that approves the extension of the Federal Old Age and Survivors' Insurance

program to include regularly employed, full-time farm labor and employees of non-profit agricultural organizations. We will not oppose the extension of this program to occasional, part-time farm labor when a practical, workable method for including such labor under this system is presented.

Chesapeake Bay Ferry Service

22. The Matapeake Ferry should be operated throughout the day and night for the greater service of the expanded needs of Eastern Shore Commerce.

We urge the Governor and the State Roads Commission procure whatever crews and ships that may be necessary to operate continuously at least two ships during the day from 6 A. M. to 10 P. M. and one ship from 10 P. M. to 6 A. M.

Public Relations

23. We realize that misunderstandings exist between consumer and producer relative to hours, wages and prices paid for farm commodities. We believe that only through education can urban and rural populations understand each other's problems. The consumers in all urban areas are organized for the purpose of keeping food prices down without adequate knowledge of farm problems.

The Maryland Farm Bureau recommends that an educational program be instituted by the American Farm Bureau to promote a better understanding between producer and consumer groups.

Protein Shortage

24. Due to the inability of all farmers of Maryland to purchase either high protein meals of 28% or 32% protein supplements in sufficient quantities to mix with the home grown grains, the Maryland Farm Bureau, Inc., hereby requests that restrictions be placed on the commercial mixing of dairy rations in order that a sufficient amount of high protein meals may be set aside for sale (1) to small local mixers who custom mix the dairy rations for farmers using home grown grains and (2) to all farmers who mix their own grain.

We recommend an investigation be made looking to the adjustment of price ceilings and that imports of proteins be stepped up.

National Fertilizer Program

25. Legislation sponsored by the American Farm Bureau, establishing a national fertilizer policy is under consideration in Congress. This bill provides for research in the production of fertilizer ingredients, authorizes three pilot fertilizer plants, sets aside Government deposits of potash and phosphate, and establishes a comprehensive demonstration program in the Counties of this nation. We believe there is need for this program and urge our Congressmen and Senators to support it.

Mastitis Control

26. We urge first that our officers and executive committee require the State Board of Agriculture through the Livestock Sanitary Service to take more active means in education, prevention and control so that our people may reduce the loss now caused by this disease.

Second: That our officers and executive committee confer with the State and Federal authorities relative to inaugurating a program of indemnification for animals condemned as seriously affected by this disease and beyond economic treatment.

Farm to Market Roads

27. Maryland will spend over \$50,000,000 on its roads during the next few years. Included in this program is a Federal post-war road aid of \$1,170,515 for each of the next three years. Amounts allocated to the counties from this sum must be matched and used for county road improvement.

We urge each county to match these Federal funds with revenue most appropriate in the light of its fiscal situation and the State to take necessary steps to retain any unmatched funds for use on Maryland roads.

We further urge that these road funds be used in maintaining roads and in building low cost farm to market roads with the view of providing hard surface roads to the greatest possible number of rural people.

We hereby instruct our officers to appoint a State Committee on roads to confer with the State Roads Commission relative to the road building and maintenance program.

Rural Electrification Administration

28. In these days of shortages, electricity on the farm has made possible greater production of vitally needed food despite labor scarcity; it has furnished comforts and conveniences at the farm home, thus holding the help already there.

We urge the appointment of a State Committee composed of farm representatives, R.E.A. and Extension to work on a program conducive to a better coverage and use of electrical current and modern equipment in rural areas.

We look forward to the time when every rural home shall have, and increasingly use, this wonderful servant.

We recognize the fact that electric cooperatives have been the agencies through which, principally, rural electrification has been fostered on an area coverage basis, thick and thin alike.

We deplore the fact that the Public Service Commission of Maryland now appears inclined to adopt a policy whereby R.E.A. systems shall be

allowed to serve only those farms which the old established utility corporations decline to serve, which policy will emasculate the R.E.A. effort and program. It will make area coverage impossible and will weaken electric co-operatives financially.

28. We regret that the Public Service Commission appears disposed to disregard the Electric Cooperative Act of 1941, enacted with strong Farm Bureau support and intended to prevent this raiding, by utility corporations, of organized R. E. A. extensions during the period of negotiations and construction.

Crop Production Publicity

29. All prospects show that "harvest labor" for 1946 vegetables will be reduced approximately 50%.

We request the proper authorities of the University of Maryland to publicize this fact through normal channels of contact with the producers, in order to avoid substantial losses to farmers by planting unharvestable production.

Nursery Research and Extension

30. The floricultural, ornamental and horticultural industries represent more than a five-million dollar business to the State and there is a great opportunity for expansion of these industries in Maryland. The Floriculture and Nursery Associations request the Maryland Farm Bureau to endorse its request of the University authorities, the Governor and Legislature for an appropriation of at least \$15,000 for instruction, research and extension work in these important subjects.

Tobacco Research

31. Tobacco is the most important crop in Southern Maryland and one of the most important in the State, with an average annual value, in recent years, of approximately \$15,000,000 and there is danger that the favorable market for this group will be lost unless production can be increased in keeping with increased use of cigarettes.

Additional research is needed to discover improved and more economical methods of production if an increase is to be encouraged and adequate facilities for tobacco research cannot be provided on the land now available which is privately owned and operated under a short-term lease for such work.

It is the opinion of the Maryland Farm Bureau that a State appropriation of not less than \$30,000 be provided for the purchase of land, the erection of buildings and the providing of other necessary facilities for such research, and an appropriation of \$10,000 annually for the maintenance and operation of such a research unit.

Increased Tobacco Production

32. We recommend to the Farm Bureau membership in the Southern Maryland Counties, the project launched by the Extension Service, Farm

Bureau and other organizations for increasing tobacco production in Southern Maryland. This affords a great opportunity for the organization, as well as all concerned, to increase the prosperity of this area or the State through the increased production of tobacco. There is no possibility of an excess surplus. Maryland tobacco has a premium for use in making cigarettes. We, therefore, believe that every effort of the Farm Bureau should be directed toward cooperating with the Extension Service and other agencies in increasing this crop on the large acreage of idle land in this section of the State.

Chesapeake Bay Bridge or Tunnel

33. The lack of sufficient transportation facilities between the Eastern and Western Shores of Maryland handicaps the trade and commerce between these sections of the State.

The Eastern Shore is vitally concerned with the marketing of its agricultural and seafood products which now go to out-of-state markets because of the serious lack of transportation facilities.

The movement to build a bridge or tunnel across the Chesapeake Bay to correct these inadequate transportation facilities was temporarily suspended because of the war emergency.

The Maryland Farm Bureau, Inc., recommends the construction of a bridge or tunnel across the Chesapeake Bay. We further recommend that the bridge or tunnel be financed by a bond issue and its tolls dedicated to servicing and retiring this debt. Copies of this resolution to be sent to the Governor of Maryland and the Chairman of the States Roads Commission.

Fresh Egg Fund

34. Future problems in marketing eggs will be very serious and the necessity for improving the average quality of market eggs in Maryland will be greater than ever.

Adequate administration of the Maryland Fresh Egg and Sizing Law requires more funds to accomplish the objectives of the Law for producer and consumer.

We recommend that the State Legislature increase the present appropriation of the Fresh Egg and Sizing Law to \$12,500 in order that a comprehensive educational program can be carried on.

Pullorum Fund

35. There is continued need for more extensive pullorum testing work to be done with poultry breeding flocks, especially turkeys, in order to reduce losses from disease.

Many more hatcheries and hatchery flocks should qualify for the pullorum-passed stage of the Maryland Poultry Improvement Plan.

We urge the State Legislature to increase the present appropriation to \$25,000 for pullorum-testing work in the State, said funds to be administered by the State Live Stock Sanitary Service.

Resolutions of the Associated Women of the Maryland Farm Bureau

The major objective of our family organization is the development of a full and satisfying life for rural people.

Farm people should create the conditions under which their income and their resources may be translated into better living as well.

We, the Associated Women of the Maryland Farm Bureau, representing over 10,000 active members and meeting in annual convention, do hereby go on record as favoring the following resolutions.

The American home is the foundation of our faith and ideals and must be preserved at any cost. The home is still the basic unit of society and it is in the home where we inculcate the fundamental ideals of character and the customs and traditions of American life. The future world depends upon the high ideals of Christian homes. We appeal to farm women within our respective communities to develop practical and effective services in befriending and counseling of youth and we recommend a definite plan for recreation in the home or community to curb juvenile delinquency.

Christian faith will survive if we, the people, will accept the challenge to preserve it. Recognizing what Christian faith means in everyday living, we pledge our efforts to support actively the rural church.

One of rural America's most urgent problems is to provide a program to bring about better facilities in rural areas for hospitals, medical care and improved health. It will take the combined efforts of the medical profession and rural people to solve the problem.

We urge state, county and local units of the Farm Bureau to study the needs of their own schools in relation to these issues and encourage effective action to improve the educational system.

Be It Resolved that the Associated Women of Maryland Farm Bureau continue their support of the 5-point educational program for Maryland's public schools—helping to get the program into operation in every county just as soon as possible—in order to eliminate the inequalities and deficiencies the present system offers rural youth in most counties. We recommend that each county association cooperate with its county school officials in every possible way, especially in the study of budget proposals to see that adequate funds are available for education—and because adequate funds cannot be provided from local resources in all instances—resulting in inequalities in educational opportunity among our counties, we recommend a state fiscal program for education be provided to overcome these deficiencies.

We offer our fullest cooperation to the National Safety Council in obtaining and spreading information which will prevent loss of life and property.

We recognize that, as a dominant world power, America must maintain an adequate military force. However, we do believe that this can be done without universal compulsory conscription.

We reaffirm our faith in the American way of life by accepting our responsibilities, duties and privileges as citizens in an active, intelligent and forward-looking manner.

We support wholeheartedly the principles proclaimed in the United Nations Charter and approve the objectives of the United Nations Organization. We urge the study and discussion of all proposals recommended for the United Nations organization in order that we may take effective action in realizing these goals.

We believe that we must test our hopes for the future by our Christian faith in spiritual power and our Christian belief in the brotherhood of man.

In Memoriam

The Associated Women of the Maryland Farm Bureau, having suffered the loss of one of its most valued and enthusiastic members, Mrs. James Davis, wishes to offer the following resolution:

BE IT RESOLVED: That in the passing from our midst of our dear member, Mrs. James Davis, we lost one of our most enthusiastic and valued members, interested and active in every phase of our association. We wish to go on record in expressing our deep appreciation of her strong Christian character, her friendly manner, making her companionship a joy to her many friends and her personality of inexpressible value to her community. She will ever be remembered lovingly by those who knew her.

BE IT FURTHER RESOLVED: That the secretary be asked to incorporate this resolution in the minutes of this meeting and a copy be sent to the Maryland Farm Bureau News Letter and one also be sent to her daughter, Mrs. Russell Scarborough.

Appreciation

We wish to express our heartiest appreciation to all who have made the program of the 30th Annual Meeting of the Maryland Agricultural Society and the Maryland Farm Bureau, Inc., an outstanding success. Especially do we recognize the contributions made by Mrs. Charles W. Sewell, Director of the Associated Women of the A. F. B. F.; Mr. Hassill E. Schenck, President of the Indiana Farm Bureau; Governor Herbert R. O'Connor, Rev. William C. Roberts, Dr. H. C. Byrd, Dr. Thomas B. Symons, Hon. Lansdale G. Sasser, and T. Roy Brookes.

We realize the long hours and hard work involved in the preparation and operation of our conventions and we commend President Weagly, Secretary Wise and the Staff for their efforts in making this convention a success.

Mr. Claude Phillips moved the acceptance of the resolutions as a whole, and Mr. Colona seconded the motion and it was carried.

MR. HEAPS: I move that the actions of the Board of Directors, as contained in the minutes of their proceedings since the last corporation meeting, be and are hereby approved and ratified.

Motion seconded by John Smith and carried.

MR. WISE: The Board met yesterday as a Nominating Committee, as provided in the By-Laws. When nominations were called for, our President, Roy C. F. Weagly, announced he was not a candidate for office this year, and our Vice-President, Mr. Leaverton, was nominated to be president, and I now place his name in nomination as President for the coming year.

John Smith seconded the nomination.

There being no other nominations, Mr. King moved that the nominations be closed and the Secretary be authorized to cast the ballot of the whole for Mr. Leaverton as President.

Motion was seconded and carried and the Secretary cast the ballot.

MR. LEAVERTON: Those of you who know me well, and most of you do, know that I am very poor at making a speech. However, I am very happy to have this honor, both for myself and for Kent County. I appreciate very much the confidence that is entrusted to me by this group. I hope that I do not come too far short of your expectations, and I certainly hope that I shall have the cooperation of all the Directors, Secretary and field men. I believe that I will in this undertaking, and I trust that it will not be too much of a hardship to me. Thank you very much for the confidence entrusted to me.

MR. WISE: The Nominating Committee nominated three of our good Directors, but after consideration Mr. Wilson Heaps was nominated by your Board of Directors to be Vice-President for 1946.

There being no other nominations, Mr. Townshend moved that the nominations be closed and the Secretary be instructed to cast a vote for the whole for Mr. Heaps as Vice-President. This was seconded and carried. The Secretary cast the vote.

MR. HEAPS: Friends, I am truly grateful for this honor you have conferred upon me. I feel quite humble in accepting it. I realize more than anyone else my limitations. Nevertheless, I pledge my best endeavor for you. My first obligation is to do my best to serve you. There is no privilege that I consider better than to serve a group of people in this State and Nation. I think this is the finest group of people I know. Anyone is privileged to work with them, and so I am truly grateful.

MR. WEAGLY: I want to say to Mr. Leaverton and Mr. Heaps that I am sure they will have the cooperation of everyone. I have had it and I certainly appreciate it. I have been with the Farm Bureau in my County and State for some time. I will still be on the firing line. My name is on the Board of the Maryland Farm Bureau. I started in Washington County

as Secretary to the County Farm Bureau; I next went to Vice-President of the County, then President, and that went for quite a stretch until I became Vice-President of the Maryland Farm Bureau, and three years ago I was elected President. It totals up to 20 years that I have worked with you men. It has been a pleasure. I want you to know that I am not going to be put on the shelf. I am still going to go down in some of the counties and come and see you.

Next is the confirmation of Directors:

Mr. Heaps read the Nominations from the counties. Mr. McCue moved that the nominations be confirmed. Mr. Spies seconded the motion and it was carried. The following were declared elected Directors for 1946:

Allegany County: Harry Barton; *Anne Arundel*: Oscar F. Grimes, Sr.; *Baltimore*: F. Ridgely Todd, G. H. Hibberd; *Calvert*: John C. Ward; *Caroline*: C. J. Kern; *Carroll*: C. Jesse Hull, Randall Spoerlein; *Cecil*: D. B. McDowell; *Charles*: Walter W. Bowling; *Dorchester*: S. W. Linthicum; *Frederick*: James E. Ferrell, T. S. Anderson; *Garrett*: William Winterberg; *Harford*: Wilson A. Heaps, A. G. Ensor; *Howard*: J. Wilson Lord; *Kent*: Howard Leaverton; *Montgomery*: James D. King; *Prince Georges*: H. C. Townshend; *Queen Annes*: John W. Smith; *St. Marys*: Frank D. Hayden; *Somerset*: Harry Keenan; *Talbot*: Francis A. Schwaninger; *Washington*: D. Eldred Rinehart; *Wicomico*: C. C. Phillips; *Worcester*: Letcher L. Colona; *Associated Women*: Mrs. C. J. Kern, Mrs. Randall Spoerlein; *Md. Co-op. Milk Producers, Inc.*: R. W. Shermantine; *Md. Horse Breeders Assn.*: Joseph F. Flannagan; *Md. State Horticultural Society*: Marshall T. Heaps; *Md. State Poultry Council*: John W. Snoddy; *Md. Stockmen's Assn.*: J. Herbert Snyder; *Md. Tobacco Growers Assn.*: J. E. McCue; *Md. Nurserymen's Assn.*: L. H. Willis; *Md. Vegetable Growers Assn.*: Ridgely Todd; *Southern States Hillsboro-Queen Anne Marketing Co-op., Inc.*: Charles I. Boyle; *Associated Women Honorary Directors*: Mrs. Lloyd Shaw, Mrs. Harvey Hill, Mrs. P. D. Brown, Mrs. Russell Scarborough, Mrs. John Whaley, Mrs. Ralph Shockley.

The meeting adjourned at 11:45 a. m.

ANNUAL MEETING MARYLAND AGRICULTURAL SOCIETY

Friday, January 11, 1946

R. C. F. WEAGLY, Chairman

The annual meeting of the Maryland Agricultural Society was called immediately after adjournment of the Maryland Farm Bureau.

MR. WEAGLY: The roll call is next, but it will be the same as with the Farm Bureau.

Mr. Claude Phillips moved its acceptance; Mr. King seconded the motion and it was carried.

Allegany Co.: H. J. Barton, Mabel A. White, Charles Harvey; *Anne Arundel*: Arthur Jones, Albert W. Taylor, Jr., Oscar Grimes; *Baltimore*: F. Ridgely Todd, G. H. Hibberd, W. Wheeler Boyce, P. C. Turner; *Calvert*:

John C. Ward, J. B. Morsell; *Caroline*: C. J. Kern, F. D. Zeigler; *Carroll*: C. J. Hull, Edwin A. Englar, Randall Spoerlein; *Cecil*: D. B. McDowell, J. S. Reisler, R. G. MacDonald; *Charles*: Walter W. Bowling, Eloise Gardiner, R. P. Bowling; *Dorchester*: S. W. Linthicum, Reginald A. Jones, Milton Malkus; *Frederick*: James E. Ferrell, T. S. Anderson, R. C. W. Schaffer; *Garrett*: William Winterberg, Charley B. Miller, L. W. Harman; *Harford*: Wilson A. Heaps, A. G. Ensor; *Howard*: J. W. Lord, G. C. Nichols, Vernon Bandel; *Kent*: H. S. Leaverton, F. O. Sutton; *Montgomery*: J. D. King, Mrs. Susan C. Fry, G. R. Canby; *Prince Georges*: H. C. Townshend, C. A. Wilson, W. E. Duvall; *Queen Annes*: J. W. Smith, Rachel M. Whaley, Norman Walls; *St. Marys*: F. D. Hayden, Mrs. Elizabeth Russell, Mrs. Susan P. Greenwell; *Somerset*: Harry Keenan, J. Miles Lankford, Robt. L. Chamberlin; *Talbot*: Francis A. Schwaninger, Lola M. Blades, Graham D. Price; *Washington*: D. E. Rinehart, W. H. Hovermale, Austin McKee; *Wicomico*: C. C. Phillips, S. R. Atkinson, John Parker; *Worcester*: Letcher L. Colona, L. D. Shockley, Preston Downs; *Md. Crop Improvement Assn.*: J. C. Rutledge, J. W. Magruder, Cecil K. Holter; *Md. Co-op. Milk Producers, Inc.*: D. G. Harry, R. W. Shermantine, Jess K. Kerr; *Md. State Horticultural Society*: D. T. Walker, A. F. Vierheller, D. E. Rinehart; *Md. State Poultry Council*: J. W. Snoddy, Morley A. Jull, Walter A. Spearin; *Md. Stockmen's Assn.*: J. W. Shirley, Jr., Jos. M. Vial, J. K. Funk; *Md. Tobacco Growers Assn.*: C. Carroll Lee, George Sachse, J. E. McCue; *Md. Vegetable Growers Assn.*: A. Lee Towson, Francis C. Stark, Jr., C. P. Whiteford; *Md. State Horse Breeders Assn.*: Joseph F. Flanagan, G. L. Stryker, Louis McL. Merryman.

MR. WEAGLY: The Secretary will read the call of the meeting:

December 19, 1945.

TO COUNTY SECRETARIES AND AFFILIATE AND ASSOCIATE SECRETARIES

Notice of Annual Meeting of the Executive Council of the Maryland Agricultural Society

Dear Sir:

The annual meeting of the Executive Council of the Maryland Agricultural Society will be held January 11, 1946, at 11:30 a. m., Lord Baltimore Hotel, Baltimore, Md.

Blanks are enclosed for you to submit the credentials for the council members of your organization.

Very truly yours,

C. E. WISE, JR., Secretary.

MR. WEAGLY: Next we will have the minutes read by Mr. Wise.

Mr. Wise read the minutes of annual meeting January 12, 1945, and Mr. Schwaninger moved their acceptance as read. This was seconded and carried.

Dr. Symons read the Treasurer's report, a copy of which was handed to each delegate. Dr. Symons moved the acceptance of the report as read. Mr. Wetzel seconded the motion and it was carried.

**MARYLAND AGRICULTURAL SOCIETY—MARYLAND FARM
BUREAU FEDERATION**

Financial Statement, July 1, 1944-June 30, 1945

Appropriation \$2,265.00

Expenditures:

Date	Payee	Classification	Expended
1944			
July 24	Joseph Murray	Exhibit (Balto. Co.).....	\$ 30.00
	Gloria Myers	Exhibit (Balto. Co.).....	25.00
	Mrs. Harry Weidman	Exhibit (Balto. Co.).....	20.00
	Md. Farm Bureau, Inc.	Office Rent (July).....	53.33
Aug. 28	Md. Farm Bureau, Inc.	Office Rent (Aug.).....	53.33
Sept. 28	Md. Farm Bureau, Inc.	Office Rent (Sept.).....	53.33
Oct. 19	Md. Farm Bureau, Inc.	Office Rent (Oct.).....	53.33
Nov. 15	Arthur M. Ahalt	Travel (Farm Meeting).....	7.08
	M. T. Johnson	Postage	75.00
	Md. Farm Bureau, Inc.	Office Rent (Nov.).....	53.33
Nov. 30	Wm. Paul Walker	Travel (Farm Bur. Meeting).....	75.68
	Marianna Lee Long	Travel (N. E. States Meeting).....	43.24
	Dorothy Emerson	Travel (N. E. States Meeting).....	37.30
	K. G. Connolly	Travel (Farm Meeting).....	14.11
	Anna Trentham	Exhibit (Balto. Co.).....	12.50
1945			
Jan. 3	A. B. Hamilton	Travel (Dairy Meeting).....	17.30
	Md. Farm Bureau, Inc.	Office Rent (Dec.).....	53.33
Jan. 26	K. G. Connolly	Travel (Farm Bur. Meeting).....	14.05
	Mary Frey	Travel (Farm Bur. Meeting).....	17.55
	Jacqueline I. Gray	Travel (Farm Bur. Meeting).....	20.00
	Doris Hollinger	Travel (Farm Bur. Meeting).....	1.15
	Elizabeth R. Shank	Travel (Farm Bur. Meeting).....	19.00
	Dr. Robert H. Daines	Travel (State Hort.).....	16.00
	B. A. Porter	Travel (State Hort.).....	7.96
	Md. Farm Bureau, Inc.	Office Rent (Jan.).....	53.33
Feb. 13	Firman E. Bear	Travel (Farm Bur. Meeting).....	9.58
	Md. Farm Bureau, Inc.	Office Rent (Feb.).....	53.33
Mar. 27	Md. Farm Bureau, Inc.	Office Rent (March).....	53.33
	Mrs. M. T. Johnson	Postage	85.00
June 18	Art Photo Engraving Co.	Printing (Annual Report).....	20.86
	Md. Farm Bureau, Inc.	Office Rent (April, May, June).....	160.03
June 25	Maryland Penitentiary	Printing (Grange Annual Report)	160.00
June 29	Mrs. Amelia Gambrell	Exhibit (Balto. Co.).....	22.50
	Miss Gloria Myers	Exhibit (Balto. Co.).....	30.00
	Richard Murray	Exhibit (Balto. Co.).....	25.00
Total			\$1,445.86
Sept. 11	Maurice Leeser Co.	Printing (Annual Report).....	\$ 819.14
Total Expenditures.....			\$2,265.00

This account is audited by the State Auditor.

Mr. King moved that the same officers be nominated as for the Farm Bureau, with the exception of Dr. Symons as Treasurer. Motion seconded and carried. The following were declared elected: H. S. Leaverton, President; Wilson A. Heaps, Vice-President; C. E. Wise, Jr., Secretary; T. B. Symons, Treasurer.

MR. WEAGLY: Now those tax reports are outside, don't forget to take them.

Mr. King moved for adjournment. Motion seconded and carried. Meeting adjourned at 12:15 p. m.

MINUTES
OF THE
Eighth Annual Meeting
OF THE
Associated Women

Maryland Farm Bureau, Inc.

January 9, 1946

Mrs. C. J. Kern, President, presided. Following the Pledge of Allegiance to the Flag and singing of the National Anthem, led by Mrs. Randall Spoerlein, a devotional service was conducted by Mrs. Lloyd Shaw of Allegany County.

R. C. F. Weagly, President of the Maryland Farm Bureau, Inc., extended greetings and congratulated the women on the help they gave in membership work. He stated that Maryland was one of the seven States which made the "Big Brother" quota. More membership, he asserted, calls for more service in the counties through Discussion Groups.

Mrs. Kern, in her annual message, expressed appreciation of the cooperation given by the women and the increase in both members and interest. She reported seven district meetings, the seventh being a meeting in Delaware, to which Mrs. Weagly accompanied her. Planning Group work is the pulse of the organization, she stated. She attended 12 banquets in the counties and several national meetings, including the meeting of the District Insurance Chairmen. She substituted for Mrs. Weagly as speaker at the Extension Workers' Conference in Baltimore, and attended the Northeastern Conference. Mrs. Kern urged that the Associated Women sponsor leadership for 4-H Clubs, as was done prior to the war. She reported that Wicomico leads the state for Clubmobile with a donation of \$200.

Minutes of the last meeting were approved as read by the secretary.

C. E. Wise, Jr., Secretary-Treasurer of the Maryland Farm Bureau, Inc., gave a financial report.

Following a report of the Credentials Committee by Mrs. Shockley, the roll of the counties was called. All but two counties were represented by voting delegates.

Mrs. Atlee Armour gave the following report of the Nominating Committee: President, Mrs. C. J. Kern; Vice-President, Mrs. John Flook.

Mrs. Weagly called for nominations from the floor. There being none, a motion was passed instructing the secretary to cast a ballot for the persons nominated.

Representatives of the respective districts were then asked to nominate their director and voting delegate for the meeting on Friday morning. The following were elected:

District No. 1—Director, Mrs. Lloyd Shaw, Allegany County; delegate, Mrs. Howard Remsburg, Washington County.

District No. 2—Director, Mrs. Harvey Hill, Howard County; delegate, Mrs. Harvey Hill, Howard County.

District No. 3—Director, Mrs. P. D. Brown, Charles County; delegate, Mrs. P. D. Brown, Charles County.

District No. 4—Director, Mrs. Russell Scarborough, Baltimore County; delegate, Mrs. Atlee Armour, Cecil County.

District No. 5—Director, Mrs. J. D. Whaley, Kent County; delegate, Mrs. Ford Adams, Talbot County.

District No. 6—Director, Mrs. Ralph Shockley, Worcester County; delegate, Mrs. Edgar Williams, Wicomico County.

A report of outstanding accomplishments during the past year was given by each county.

Afternoon Session

A memorial service for Mrs. James Davis and Miss Myers was conducted by Mrs. Atlee Armour. She read two beautiful poems and lighted two candles in front of a large vase of flowers, while Mrs. Flook played softly "Lead Kindly Light."

Mrs. R. C. F. Weagly, President of the National Associated Women, gave an address on "The Bill of Rights." A few excerpts from her address are:

"We are fortunate to have had parents who knew and believed in God."

"We need to rebuild our faith in God, if we would build a peaceful world."

"The value of democracy has been proved by the United States, but it can be lost if we relax our efforts."

"We can build a peaceful world if we believe and prove what we said we were fighting for."

"We can be true to our heritage by conserving that heritage—the soil."

The following persons brought greetings from the organizations they represented:

Miss Jane Warfield—Senior 4-H Club Council.

Mrs. Sarah Porter Ellis—Southern States Cooperative.

Mrs. Homer Remsburg—State Council of Homemakers.

Miss Venia M. Kellar—Assistant Director of Extension. She told of plans for the 1946 Rural Women's Short Course at the University of Maryland. The theme of the course will be "One World."

Mrs. Charles W. Sewell, Administrative Director of the American Farm Bureau, then brought a stirring message on the topic "The Morning Breaks." Following are a few points from her address:

"It is always darkest just before the dawn breaks."

"It is going to take the courage of the farm women to help the rest of the nation come into the new day."

"We must take the responsibility of the homes of the nation. Hand in hand must go the work of the church."

"Four points for Farm Bureau—An alert, informed citizenship; simple plan; teamwork; future growth."

"A leader must be—Patient; must take criticism and turn it into helpful suggestions; be brave; be a good listener; be able to develop a great team."

"If everyone would sweep in front of his or her home, then the whole world would be clean."

A report of the National Convention was given by Mrs. P. D. Brown.

Mrs. John Flook presented the report of the Resolutions Committee, which was adopted. This report was later adopted by the Farm Bureau and appears as a part of the resolutions of that organization.

ANNA S. SPOERLEIN, Secretary.

EIGHTH ANNUAL MEETING
OF
Maryland State Council
OF
4-H Clubs

January 9, 1946

President Vernon Bolte called the meeting to order, and 4-H identification tags were distributed to the voting delegates from each County Council.

A bank balance of \$99.26 was reported by the Treasurer. It was stated that all organized counties had paid both their current and back dues, which resulted in the largest bank account since the organization of the Council.

An auditing committee was appointed by the President, consisting of: Jean Reese, chairman; James Garland, and Robert Hanson.

The President appointed a nominating committee representing the different sections of the state: Henry Heaps, chairman; Wilma Ryan, Marian Linthicum, Charles Brim, and Martha Lumpkin.

While the committee withdrew to make their decisions, the scheduled program continued, with the "County Highlights On Parade." Each of the 15 organized counties responded with a two-minute report of the most impressive and outstanding meeting or event that took place in his or her county during the preceding year. These "highlights" included such events as box socials, coast to coast radio broadcasts, educational pursuits in recreation projects, and panel discussions. The reports emphasized a noticeable increase in membership and better planned programs in the County Councils.

The President announced that, beginning in the summer of 1946, 4-H Club Week will again be resumed, making it possible to hold two State Council meetings yearly, one in January and one during Club Week. A motion was passed that officers be elected at the January meeting and serve for one year. Another motion provided that an executive board, composed of the official board, the presidents of County Councils or their appointees, and the official board of the preceding year replace the Steering Committee formed in 1945.

Miss Emerson commented on the resumption of the Rural Women's Short Course in 1946. She also introduced four new assistant home demonstration agents.

Mr. Downey presented several newly appointed assistant county agents.

The loud applause following each introduction welcomed the much-needed assistance of these agents in the counties.

The first report of state and inter-state events and meetings was given by Henry Heaps of Harford County, who attended the American Country Life Association Conference, at Jackson Mills, West Virginia. He emphasized the importance of the conference topic, "Youth In The Rural Community." Young people are not young people long, he said. Therefore, our first great responsibility is being a fine person. This can be accomplished through: A better health program; more formal education; and higher ideals in social and religious living.

The main business of the American Country Life Association Conference in 1945, he stated, was the revision of the old constitution and adoption of a new name, "American Rural Youth Association."

Henry paid tribute to the unprecedented and great honor of having a Maryland 4-H boy, Robert Hanson of Montgomery County, as the newly elected president of this national organization. His report was concluded with an explanation of the various workshops at the conference, including studies in radio, recreation, dramatics, and group singing.

"Daddy" Jenks greeted the large group of 4-H members and gave a few additional remarks reaffirming the importance of the Rural Youth of America. He suggested that the official board meet and represent this State Council at a meeting of the Maryland group of Rural Youth of America. This was put in the form of a motion and passed.

Mrs. Laura Bull, who explained the proposed 12-year educational program for Maryland at the meeting last year, was introduced and presented some points which will improve and enforce the newly passed educational program for the state. "Don't let it stand where it is! Do something about it!" she said. Better salaries for teachers and closer contact with school librarians are two important factors for betterment. She also suggested that a standing committee be appointed to study legislation and its progress, not only in Maryland but in the nation.

Jean Reese, chairman of the auditing committee, verified the correctness of the Treasurer's book and statement for the year 1945.

Henry Heaps, chairman of the nominating committee, read the following nominations:

President—George Fry, Montgomery County; Donald McKnight, Harford County.

Secretary—Jane Chilcoat, Baltimore County.

Treasurer—Louise Brown, Caroline County.

Nominations from the floor included the name of Henry Heaps for president, and a declination by Donald McKnight as candidate for president.

He explained that this move was made in order that his fellow countian, Henry Heaps, would have more backing, since their county had originally agreed to back him for president.

Following an interval of spirited campaign speeches, it was moved and seconded that the nominations be closed and voting by secret ballot proceed.

Afternoon Session

The following officers were announced as elected for the coming year:

President—Henry Heaps.

Vice-President—George Fry.

Secretary-Treasurer—Louise Brown.

Each county selected a club member to represent it in a two-minute extemporaneous speech and vie for red and blue ribbon honors. The judges were: Mrs. Edwin Fry, Mr. W. Clark, and "Daddy" Jenks, who made their decisions on the basis of appearance of the speaker, ability to hold audience attention, and development of topic.

Mrs. Fry announced the results.

Blue Ribbon winners were:

John Bruce, Cecil County, "A Community Problem Is My Responsibility."

Stuart Smith, Dorchester County, "We Should Reach More Young People With the 4-H Club Program."

Doris Thompson, Howard County, "Conversation and Opportunity."

Martha Lumpkin, Kent County, "It Is Great To Be An American."

Imogene Ryan, Allegany County, "It Is Important To Have The Ability To Speak In Public."

Solomon Hoke, Carroll County, "Life In The Country."

Jane Warfield, Montgomery County, "Home Is What You Make It."

Mary Louise Hahn, Baltimore County, "Hard Work Is The Road To Success."

Malcom Heaps, Harford County, "4-H Marriages."

Zane Shiller, Talbot County, "The Grass Is Greener On The Other Side Of The Fence."

Joan Giddings, Anne Arundel County, "Good Neighbors."

Red Ribbon Winners were:

Martha Zeigler, Caroline County, "The Golden Rule."

Staley Hahn, Frederick County, "Think Before You Act."

Heidwig Heiman, Washington County, "Building The Peace Starts At Home."

Richard Carter, Queen Anne County, "We Win Even Though We Lose."

Madelyn Simmons, Calvert County, "Friends."

A discussion patterned after the "Ten Guide Posts For 4-H Programs," the theme of the 1945 Club Congress, was presented and led by George Fry,

Robert Hanson, and Donald McKnight, with the assistance of Mr. Downey, all of whom attended the 1945 Club Congress. Due to the shortness of time, only five topics were chosen for discussion. They were: "Developing Talents For Greater Usefulness"; "Choosing A Way To Earn A Living"; "Creating Better Homes For Better Living"; "Conserving Nature's Resources For Security And Happiness"; "Serving As Citizens In Maintaining World Peace."

Donald McKnight displayed the silver trophy which he was awarded as winner in the National Leadership Contest at the 1945 Club Congress.

Miss Emerson gave a brief but forceful summary speech of the day's meeting and its purpose and meaning. She summarized it as "I serve—I am at peace within—I cooperate—I share and grow."

Vernon Bolte introduced the new President, Henry Heaps, who said in response: "As young people we have a great opportunity facing us. We have much to do. Go back to your homes and communities and do just one thing the very best way you can! We are not alone. We must not fail. Let us go upward and forward!"

It was moved and seconded that the State Council back Dr. Pullen in the educational program for another year.

P R O C E E D I N G S
O F T H E
Maryland State Horticultural Society
F O R T Y E I G H T H A N N U A L M E E T I N G
Hagerstown, Maryland
January 3 and 4, 1946

The meeting convened at Hotel Alexander, Hagerstown, at 10:30 A. M., January 3rd.

FARM ELECTRIFICATION AND COMMERCIAL RATES

A. V. KREWATCH, Extension Agricultural Engineer,
Extension Service, University of Maryland,
College Park, Maryland

Farm electrification continued to advance in Maryland during the war period. The use of electricity increased on farms as well as in the related operations such as cold storage plants, freezer locker plants, chicken processing plants, commercial hatcheries and in similar processing and preparation centers of farm products for sale.

Electric rates on the other hand, have gone down, one of the few items of cost for the farmer that have gone down. I wonder how much longer we can expect these rate reductions with rising costs of equipment, materials and labor.

We know that domestic rates have been reduced. My estimate would be approximately 10 per cent. I don't know what would be the comparison on commercial rates.

A Farm rate (and I used the term advisedly since I'm not a rate specialist) is in between a purely domestic rate and a commercial classification. Such rates are going to receive much attention in the near future as uses outside of the farm home increase. Companies are studying "ticklish" questions such as,—If a farmer hatches eggs on a domestic rate, eggs hatched in town should be on what rate? A small apple storage is on a domestic rate, how about the large storage? A cash-operated farm should be on what rate? Personally, I feel it will be poor policy for companies or cooperatives to tie up rural electrification business with too many provisions and penalties in order to play safe. Companies need the answers, however, to these questions and I feel a simple answer can be found.

In my mind, the domestic rate should be the lowest rate. It should carry with it a certain responsibility or purpose to serve. It should help improve the standard of living, improve health facilities, provide educational opportunities by saving time and making homes comfortable, and reduce home drudgeries. That rate covers a use that does not bring in a cash income whether in town or on the farm, and, therefore, it should be the same in country as in the town.

Farm uses outside the home, however, have increased and will continue to increase until serving organizations now are wondering what to do. Action will hinge around the answer to "when is a farmer a domestic user and when does his operation become commercial?"

Let us now look at these rates with a view to comparing them with commercial rates. In the domestic schedule demands and service charges receive limited consideration except to put a stop or top limit on demand, but not on use.

The commercial rate must include cost of service, readiness to serve (demand), off peak or on peak use and step by step costs. The use of large amounts of current and continuous use are expected from large demands. If the demand is large and the use limited a provision in the rate based on demand becomes the most important item for such users. In a way such a user pays for "a readiness to serve" even though he uses very little current. Generation and transmission facilities are provided mostly in accordance with demand and not so much on the total number of KW hours used.

Your most important consideration, then, for apple storages is to keep your demand at a minimum, because your operation is concentrated, let us say, during a six months period and minimum bills and minimum blocks are essential considerations.

Consult with officials of your power company. It is probable that by considering various peak-load periods with varying rates, a system may be worked out whereby grower-owned apple cold storages may be operated at minimum cost.

(Mr. Krewatch worked out several examples of rates that now exist with the various power companies servicing Maryland farms.)

QUESTION BOX

Submitted By Growers

What is the best nursery stock for future plantings?

The kind of nursery stock that we prefer is one-year stock. There have been plenty of two-year fruit trees available during the past few years, but if this stock is set it should be planted carefully and the trees should be mulched with manure for the first 2 or 3 years. When one-year stock is used, the larger-sized trees are preferred.

What is the best commercial peach, ripening about 10 days before Elberta? Best varieties for freezing?

The best peach ripening at this time is Halehaven. This variety has its limitations as regards color and, since the trees of this variety are vigorous growers and heavy bearers, they use a lot of moisture so the fruits must be thinned to cause good fruit size. The better the quality of fruits, the better frozen product they will make. For dessert purposes, Halehaven gives a fine frozen product followed closely by Sunhigh and Redskin. For pie purposes, Elberta and Shippers are good for freezing.

Describe wax-oil sprays and other materials for delaying blossoming.

Wax emulsion is a new development in blossom-thinning, as the wax simply coats the pistil of the blossom, preventing pollination. The emulsion has advantages in that it is not caustic so may be used in stronger concentrations without danger of burning. This material is not available commercially, as it is still partly experimental. Materials have been used experimentally for delaying blossoming in spring, but these materials have given confusing results along with various degrees of injury to buds. These materials are also in the experimental class.

CONSIDERATIONS IN ESTABLISHING A FRUIT BY-PRODUCTS PLANT

LIONEL E. NEWCOMER, Manager,

Berks-Lehigh Fruit Growers, Inc., Fleetwood, Pa.

In discussing this topic I am assuming that we are referring primarily to apples. However, the same general principles apply to all products.

Cooperative processing has been defined as vertical diversification, meaning diversification above and beyond as well as below raw production. In diversifying vertically the farmer follows his most profitable crop one or more steps beyond raw production. Instead of turning it over to others to process he, together with others, performs this step, which means that he takes a little larger share of the consumer's dollar. All of you are interested in getting the largest possible share of the consumer's dollar.

As an example of what can be accomplished by a group of growers who decide to do their own processing I will cite figures from the Cooperative of which I am the manager. When the war in Europe cut off the export market and when itinerant truckers practically stopped coming to the orchards, the apple growers in Berks and Lehigh Counties of Pennsylvania felt the need of an outlet for their export apples and grades below U. S. No. 1. In 1940 they formed Berks-Lehigh Cooperative Fruit Growers, Inc., and started processing apple juice. The past summer the mortgage was paid off, four years ahead of schedule. The growers now own their own processing plant valued at over \$100,000 and at the beginning of the 1945 processing season there was an operating capital of \$65,000 in the bank.

The growers have invested \$50,000 in capital stock. The remainder of the investment is in the form of Revolving Capital Certificates. Each year the growers have received cash for their apples equal to the amount paid by commercial processors. In other words, the growers have paid for their plant with the returns for their processing apples, which was over and above their unprocessed commercial value. The extra portion of the consumer's dollar that they have received by doing their own processing has paid for their plant. In dollars and cents this is about \$115,000. Our growers believe that it has been worth the effort.

In discussing the topic assigned, I would like to divide the considerations in establishing a Cooperative Fruit By-Products Plant into three general classifications, namely, economic, psychological and physical.

The axiom, "Necessity is the mother of invention," applies to the success of Cooperatives. Certainly, most successful Cooperatives have arisen out of a need for the service.

To my mind the first and most important consideration in establishing a Cooperative Fruit By-Products Plant is to determine the economic need for the service to be performed. Two or three growers saying "Let's start a co-op" is not sufficient reason. Questions that help to determine the need are:

1. Is there a sufficient quantity of processing grades of fruit available within a convenient trucking area?
2. Has this fruit been unprofitable when sold on the fresh fruit market?
 - A. Would it be more profitable if sold in a processed state?
 - B. Would processing all grades below U. S. No. 1 and perhaps all grades of certain sizes and varieties increase the market value of the remaining U. S. No. 1 and better grades?
3. Will there be a market for the processed product?

Before we attempt to answer these questions it may be well to look at our "Per Capita Apple Consumption" for the past 35 years.

Year	Per Capital Consumption		
	Apples Pounds	Oranges Pounds	Grapefruit Pounds
1909.....	62.2	12.6	0.9
1929.....	39.7	28.6	7.7
1944.....	26.5	49.9	12.9

These are not encouraging figures for those who plan to market their entire crop as fresh fruit. However, there is encouragement in the fact that we are consuming ever-increasing quantities of processed fruits.

Of equal importance to the volume available are the varieties available. A survey of volume and varieties should be made.

1. Are the varieties adapted to processing; that is, are the majority of class A or class B as defined by the canners? (Class A varieties are Yorks, Stayman, Golden Delicious and Grimes; all other varieties are Class B.) For apple juice, we are convinced that Stayman and Winesap should predominate.
2. In conjunction with varieties the maturity dates should be considered. It is desirable to extend the processing season over the longest possible period. It can be extended after the harvest season by adequate storage, but it is also desirable to start as early in the fall as possible and this can only be done by having an adequate supply of early varieties.

Another important economic consideration is the possibility of processing more than one fruit, or at least more than one product. If the processing season can be extended it will help to reduce per unit overhead cost and also make it possible to maintain a good staff of trained personnel. One way of doing this is to dry the apple pomace, skins and cores and later in the season process your own pectin and manufacture jams and jellies in the off-season. The fruit for the jams and jellies may be produced locally and held for processing by quick freeze, cold pack or some other method.

Equally important to the economic consideration is that of ascertaining the extent of interest in a cooperative among the growers. Are they psychologically ready to cooperate and are there growers enough who realize the responsibility of membership in a cooperative who will be willing to support the venture with money, volume of fruit, and loyalty? The organizers and the patrons must be willing to work hard to assure the success of their organization. There must be a sufficiently large group who are convinced in their own minds that they need and want a cooperative. A cooperative cannot and will not succeed if all is left to the manager. The Board of Directors and patrons must realize that the organization is theirs and that they are part of it. "Let's start a cooperative" is certainly not sufficient reason for starting one just anywhere. There must be the economic need coupled with the desire of enough growers to support the venture.

Equally important to the psychological readiness to cooperate is the understanding that services of experts must be hired and that salaries and wages will be somewhat higher than general agricultural labor. This may require some education on the part of the patrons.

Other considerations which may be termed physical are secondary to the two groups just mentioned. If there is an economic need for a processing plant and if there are sufficient producers who are willing to cooperate, then the next step is to choose a location.

In general, the processing plant should be centrally located where it will be convenient to those to be served. In choosing a specific location careful consideration should be given to waste disposal. The services of a com-

petent engineer or specialist should be engaged. Waste disposal is one of the toughest and most expensive problems of the canners. Equally important is the matter of pure, fresh water. Tremendous quantities of water are essential for steam which is used in processing, sterilizing equipment and, of course, in heating the building. Washing the raw product, cooling the finished product and plant sanitation also require great quantities of water. A location close to a fairly large stream, preferably a cold mountain stream, which will furnish fresh water and carry off clear water from waste disposal settling tanks is ideal.

Transportation to and from the processing plant is also an important consideration. A rail siding, while not essential, is highly desirable. If empty containers can be unloaded directly from the car to the production line and the finished product loaded directly from the line into cars or trucks it will add greatly to the economy of operations.

The matter of buildings is of minor importance. If suitable buildings exist at the ideal location, then remodeling may be economical. The chances are that in the long run it will pay to erect buildings specifically designed for the purpose for which they are to be used. By so doing, processing lines can be laid out so that there will be a minimum of manual labor and plant sanitation can be maintained to the greatest extent. Incidentally, the matter of plant sanitation is most important, as Federal and State Food, Drug and Health Regulations are becoming more and more rigid, requiring special construction of floors, walls, screens, drainage and waste disposal facilities.

To sum up in a sentence we may say that if there is the economic need and the desire to cooperate a Cooperative By-Products Plant will succeed.

HOW COOPERATIVES ARE ORGANIZED AND FINANCED

S. M. THOMSON, President,

Baltimore Bank for Cooperatives, Baltimore, Maryland.

Much has been learned and much experience has been gained during the last quarter-century. Cooperatives, like other kinds of business, have undergone an evolutionary process. The modern and successful cooperatives today have taken advantage of the mistakes of many of the earlier ones. The idea that cooperatives are for the most part failures still persists in the minds of many people. This is a hang-over from the time when cooperatives were formed without much capital and were promoted by people who were looking for jobs but who lacked a definite business program. In the earlier days, management often was not emphasized, with the result that there were some failures. Today we have only to look at what the West has done, what Florida and Texas have done, and what many here in the East have done to be convinced that the progressive farmers, and particularly fruit growers, are missing a golden opportunity if they do not take advantage of the lessons which have been learned and profit by them.

Cooperatives are organized in a number of ways, depending upon the

type, the territory to be served, and the purposes for which they are formed. In the case of the Maryland Horticultural Society, I assume that you are interested in the kind of cooperative, or cooperatives, which will best serve the fruit growers of Maryland, as well as perhaps some adjoining fruit counties of other states.

Today in Maryland you do not have a fruit processing cooperative or any other type of cooperative serving the fruit growers of this state which performs what we call an across-the-board service for the grower. It is the recognition of a need for this sort of thing which is the first prerequisite necessary in the organization of a sound cooperative. Ordinarily a group of growers, often combined with business men, form an organization committee for the purpose of outlining a program and recommending steps to be taken. In the case of such groups as the Maryland Horticultural Society, most of the members are business men in their own right, since the production of fruit today requires the best of business management.

An organization committee, which is a voluntary association of from six to ten men, usually appointed by the organization interested in a cooperative or by the extension service, makes it their business to determine: first, the economic need for such a cooperative; second, the potential patronage, including volume; third, the territory to be served; fourth, the best location for facilities, considering all factors; and fifth, the service, or types of service, to be performed by the cooperative. In this case you, I assume, would determine whether you want to process apple juice, frozen apples, canned apples, apple sauce, apple butter, etc., or if you are interested in peaches, canned or frozen.

It has been the experience of cooperatives which have been organized in this manner that, after a thorough survey has been completed and recommendations have been made, the prospective members have enough information to have confidence in the organization and to lend it their whole-hearted support. From the beginning it is essential that a committee or a group interested realize that management is the best insurance they can have for success. Cooperatives today are real business institutions. They perform a definite service for the producer and for the community, and they should be formed with the purpose in mind that they are to serve the public interest.

The first step that any organization committee should take is to visit some of the successful fruit or processing cooperatives already in existence. In other words, it is wise to profit by the experience of others instead of making mistakes unnecessarily. After plans have been perfected, including a survey of the prospective membership, decisions can be made as to the probable expense necessary to construct the kind and type of plants needed, a charter may be secured and by-laws may be perfected. It requires the advice of a competent attorney to aid in such matters, and the cooperative Research and Service Division of the Department of Agriculture in Washington, or the Bank for Cooperatives, will aid and assist in the matter if requested.

When the capitalization has been decided upon and the approximate costs estimated, a membership campaign may be undertaken for the purpose of raising membership capital through subscriptions to either preferred or common stock. Some of the larger processing cooperatives here in the East now finance their plants through the means of preferred stock subscriptions by the membership, plus 1 share of common stock with a par value ordinarily of \$100. The preferred stock subscriptions in the case of cooperatives using fruit products are usually in proportion to the approximate volume of fruit which the individual member grows. One of the larger fruit processing cooperatives recently financed its initial investment on this basis, with preferred stock subscriptions ranging all the way from \$500 to \$25,000. This preferred stock should be non-cumulative. Each grower would purchase the same amount of common stock, or one share.

On the other hand, some cooperatives prefer not to use preferred stock but to subscribe only common stock. In most types of cooperatives, and the type which is recommended, each member is limited to only one vote regardless of the amount of stock he may hold.

It is preferable, but not necessary, that preferred stock be held only by members or growers. Business people, or other groups, can hold preferred stock and often do in order to bring a first-class processing plant into a community and in order to keep the wealth within the state and give employment to the people native to the district where the plant is located.

In order to be financed by the bank for cooperatives, it is necessary that the members or stockholders raise not less than 40 percent of the capital necessary to purchase land and construct the facilities needed. The bank for cooperatives can finance up to 60 percent of such land and facilities if the bank is satisfied with the management and the economic soundness of the venture.

It is also necessary, in operations of this kind, to have available considerable operating capital. The bank for cooperatives usually requires that producers subscribe some of this capital, but the bank will ordinarily lend the major portion of such capital, depending upon the number of favorable factors present.

The bank for cooperatives specializes and devotes itself exclusively to this type of financing and such additional service as it can render in advice and counsel. The banks for cooperatives were organized to help the producers and to furnish cooperatives with a dependable source of capital, while at the same time encouraging sound cooperative practices. These banks, of which there are thirteen in the United States, have been operating for twelve years. They, too, had many things to learn, but during that time they have loaned approximately 2 billions and their losses have been about 1/10 of 1 percent. They have insisted on sound cooperatives, soundly managed, and above all they have paid attention to the economic need and the purposes to be served.

I might repeat that the success of any cooperative venture depends first upon the need for such a cooperative, second upon membership support, and third, but by no means least important, upon good, sound business management.

The afternoon session, January 3rd was opened with an invocation by Reverend Charles H. Funk.

PRESIDENT'S REMARKS

DWIGHT T. WALKER, Mt. Airy, Maryland.

FELLOW FRUIT GROWERS:

With your permission, I shall confine my speech to a few remarks.

I have had the pleasure of working with the fruit growers for another year. Yes, we had some work to do and it was not picking fruit. We were working together and the result is to be seen at Hancock where we have established a field laboratory and here in Hagerstown we have a scientific and chemical laboratory. I want to take this opportunity to thank the members of the society who were on this committee for their whole-hearted efforts in securing these two laboratories. To the officials of the University of Maryland, I offer my sincere appreciation for their efforts in helping to plan and establish these projects. We are indebted to the County Commissioners of Washington County for their efforts in finding us space in Hagerstown to have a laboratory. In fact, we had the utmost cooperation from everyone concerned and I thank you all.

I shall not attempt to predict the future success of fruit growing; however, I might leave this little thought for what it is worth: We fruit growers have been enjoying a false sense of prosperity as to fixed prices and profits, quality has been thrown in the discard. How long this will continue no one knows; however, some day we are going to be on our own again, when the quality of your product will be your salesman. I do not think it is too soon to plan to raise a quality of fruit that will need no salesman; what do you think?

REPORT OF THE SECRETARY-TREASURER

ALBERT F. VIERHELLER, College Park, Maryland

While there was no acute shortage of orchard equipment or supplies during the last months of the war which called for Society action, your Secretary acted upon several requests and referred these cases to Maryland War Board. The work of this Board is worthy of great commendation. The threatened shortage of fruit packages was relieved by the short crop. The war's end brought considerable relief from some problems that seemed serious, but there are other problems that will develop with the coming of peace. These new problems, such as that of farm labor, will call for unified and early action.

Price ceilings caused no great worry during the past year, and what questions did arise were handled by established grower committees ap-

pointed by the regional organizations of apple growers. There was a call from Maryland raspberry growers, and some assistance was given them in preparation of cost data for use at the national price ceiling conference.

During the past year, the state apple exhibit was sponsored by the Society; also the State Horticultural Council was given support. The most important event of the year was the dedication of the two laboratories in Western Maryland; one located in Hagerstown for running spray residue and spray load determinations, and the field laboratory at Hancock which will do research in orchard soil problems and entomological research. These laboratories were dedicated on August 24th, and many prominent officials were present at the dinner and dedication, including Governor Herbert R. O'Connor, whose deep interest in the project made possible the procurement of these laboratory facilities. Growers should not overlook the fine and consistent preliminary work done by the Society-appointed grower committee.

A new development during the year was the Food Producers' Council, composed of fruit and vegetable producers and handlers in several Eastern States organized to work with union officials in protecting the free flow of perishables from farm to market. The Society has given active support to this Council, both by membership and promotion of interest among growers.

The Horticultural Industry Advisory Committee on Foreign Trade was organized and will meet January 28-31, 1946. This is the national committee that was advocated by the Horticultural Societies, two years ago, and its work will be vital in balancing domestic and foreign trade in horticultural products.

The Executive Committee of our Society held one meeting this year, at which several policies were discussed, and the outline of this annual meeting program was set up.

It is my sad duty to announce the deaths of the following members during the past year:

Frank A. Weihe
Edgar A. Leatherman
James A. D. Garber

Having known all these men, I feel that we have lost fine citizens, real friends and men who have made contributions to the fruit growing industry. I might also announce the death of Dr. Merton B. Waite, who worked out the life history of peach brown rot. Years ago, Dr. Waite was a familiar figure in Maryland horticulture. We were informed of the death of Mr. Edwin C. Tyson recently, so still another familiar figure has passed to his reward.

I want to thank President Walker and the officers and Executive Committee for their fine cooperation and assistance during the year. They have

given a lot of time with no reward except satisfaction of results, and these results show the value of having an organized group of fruit growers.

Treasurer's Report

Checking Account—Total Cash Balance.....	\$377.39
Savings Account—Total Cash Balance.....	244.53
Total all cash	\$621.92

APPOINTMENT OF COMMITTEES

President Walker appointed the following Committees:

Nominating—M. T. Heaps, Chairman; S. M. Fulton; D. E. Rinehart.

Auditing—E. D. McCain, Chairman; W. W. Moore; G. R. Canby.

Resolutions—P. H. Beamer, Chairman; E. C. McFadden; Clay Shaw.

Dr. E. N. Cory acted as Discussion Leader of the session devoted to the topic: "DDT—Uses, Benefits and Limitations of this New Insecticide."

DDT IN CODLING MOTH CONTROL

W. S. HOUGH,

Winchester Research Laboratory of the Virginia
Agricultural Experiment Station, Winchester, Va.

One of the easiest demonstrated effects of DDT in apple orchards is its superiority over lead arsenate in codling moth control. Under our conditions lead arsenate has often reduced the proportion of wormy apples satisfactorily but the number of stings was excessive. DDT, when properly used, appears to eliminate most of the stings as well as live entries. According to our experimental results of 1945, strengths of half a pound, eight-tenths of a pound, and one pound of actual DDT in 100 gallons in seven or eight cover sprays gave better than 95% clean fruit, while the best performance of lead arsenate (3 pounds per 100 gallons) in eight cover sprays was 70%, 83%, and 88% clean fruit in the three orchards where comparative tests were made. A brief summary of the results is given in Table 1.

One important item in connection with these results is the number of sprays applied. It will be noted that six or seven cover sprays beginning with DDT in the first or second cover spray respectively and ending on August 7 appeared to be as effective as eight covers ending on August 17 or 18, but in orchard No. 1 where we omitted the third and fifth covers and completed the fourth application of DDT on August 7 the results (plot 37) showed an increase in wormy fruit and in stings. In a season especially favorable for codling moth development omission of one or two critical sprays may result in failure to obtain satisfactory control. The reason for this may be understood if we examine the data on length of the period of effectiveness of DDT spray deposit.

Duration of period of effective control of a DDT spray probably depends on several factors such as formulation of the compound used, fineness

of the particles in the preparation, and strength used. In the data presented in Table 2 it will be seen that DDT loses its effectiveness in killing codling moth larvae as the interval from the time of spraying increases. Furthermore, a spray of one pound of DDT was effective over a longer period of time than a half pound. Fifteen days after spraying the half-pound strength permitted 6% of the larvae attacking the fruit to enter alive compared to only 0.7% live entries for the one pound strength. In other words, effectiveness of the half-pound strength had decreased almost half at the end of 15 days, while the one pound strength did not show a reduction in effectiveness until tested a week later. Four weeks after spraying, the one pound strength was no longer giving effective protection to the fruit.

Another interesting item in Table 2 is the negative effect of oil in the DDT spray. It will be noted that one pound of DDT with oil added was less effective than the DDT alone when tested 26 days or more after spraying. Repeated laboratory tests of the past two seasons have shown that summer oil emulsions added to DDT sprays greatly reduced the initial toxicity of all DDT preparations under test. Under orchard conditions, however, the ovicidal action of summer oil when used at proper strength appeared to offset any loss in initial toxicity of the DDT and excellent control was obtained in plot 36 of orchard No. 1 and plot 7 of orchard No. 2 when 3 quarts and 6 quarts of oil were used respectively.

Effect on Moths.—Tests were continued at the laboratory to observe toxicity of DDT spray deposits to moths. Briefly, these results indicate that action in killing the moths is relatively slow. More than five hours exposure to the fresh spray deposit is required to produce toxic effects. After an exposure of about 24 hours to fresh spray deposits of DDT at strengths of 4 ounces, 8 ounces, and 1 pound per 100 gallons control amounted to 30%, 56%-65%, and 97% respectively. In these tests a 25% DDT formulation of very fine particle size was used. In similar tests a 50% formulation in which the particle size was larger gave no control after 24 hours exposure to the spray deposit resulting from 4 ounces of actual DDT per 100 gallons and only 7% control at the half-pound strength. Loss in toxicity of the spray deposit to moths is relatively rapid. For example, there was no control from the half-pound strength of DDT when moths were exposed for 24 hours to the spray deposit five days after spraying and only 36% control from the one pound strength.

Effect on Mites.—Experience of the past two seasons indicates a direct relation between the use of DDT on apple foliage and the prevalence of mites. In 1944 mites became sufficiently abundant on the sprayed foliage to bronze the leaves severely. In 1945 adverse seasonal conditions depressed mite development until the second week in August, consequently severe bronzing did not occur. A careful examination of the leaves in late August, however, revealed a mite population approximately seven times greater on the foliage of trees sprayed with DDT than occurred elsewhere in the orchard. The mites were just as numerous on trees sprayed through the season with 4 ounces of DDT per 100 gallons of spray as with 1

pound of DDT per 100 gallons. Increasing the concentration of DDT to 1½ pounds per 100 gallons failed to suppress mite development on trees sprayed for control of mealybugs. Two species of mites are involved, the European red mite and the apple mite (*Tetranychus schoenei* McG.)

The following materials listed in the order of their effectiveness reduced the mite population in the DDT-sprayed plots to near the level or below the level of the populations occurring on trees sprayed with lead arsenate: DN-Dry Mix at 0.66 pound, DN-111 at 1¼ pounds, and Genicide at 1 pound per 100 gallons. These materials were used with the DDT sprays in various applications beginning with the third cover spray, except that DN-Dry Mix was not used before the fifth cover spray. Three quarts of 83% summer oil emulsion added to each DDT spray from the third to the seventh cover inclusive was less effective than any of the other treatments mentioned, resulting in 64% reduction of the mite population as compared to 76% to 98% reduction from the other treatments listed. Previous experience has indicated that 6 quarts of summer oil emulsion per 100 gallons is usually required for effective control of mites.

Visible and Chemical Residues.—Some orchardists who used DDT in the powder preparations found it difficult to remove the visible residue at harvest time. This was true in a number of instances when the last spray was applied around the middle of August. Our own experience indicated that the visible residue was more readily removed by the polishing machines when Bordeaux mixture was used with DDT in the last or next to the last spray. Visible residue was more conspicuous from 25% DDT than from 40% or 50% preparations, indicating that the conspicuous residue is largely due to the inactive ingredient.

We are greatly indebted to the following persons for making analyses of DDT residues on all samples of apples submitted: Rodney C. Berry, Chief Chemist; Boyd L. Samuel, and James A. Johnson, Jr., Chemists, Division of Chemistry, Department of Agriculture, Richmond, Virginia; and Eugene L. Bailes, Chemist, Geigy Company, New York City. A brief resume of their results indicate the following:

(1) DDT at ¼ pound or ½ pound with lead arsenate 3 pounds per 100 gallons in all cover sprays from the second to the eighth, ending on August 17, and DDT alone at ½ pound per 100 gallons in the second to the seventh covers, ending August 7, resulted in residues of .05 grain DDT per pound of fruit or less than this amount at harvest time.

(2) Residues resulting from sprays of 1 pound of DDT per 100 gallons in six to eight applications, ending August 7 or August 17-18, usually exceeded .05 gr./lb. (range .044 to .088 gr./lb.).

(3) The addition of 3 quarts of summer oil emulsion in the third to seventh cover sprays or 6 quarts of oil in the last four cover sprays containing DDT increased the DDT residue usually to two or more times the amount occurring on fruit which received similar treatments without oil.

(4) DDT residues were not readily removed by the usual methods of washing or polishing the fruit. In addition to hydrochloric acid wash we used the following washes: sodium silicate 75 pounds, soap 4 pounds and 10 pounds, IN-181-P 2 ounces, and Santomers 1 gallon per 100 gallons.

TABLE I

Summary of Results of Orchard Tests with DDT Versus Lead Arsenate for Codling Moth Control; Winchester, Virginia, 1945.

Plots	Materials in 100 gallons and sprays applied	Percent (Avg.) Clean Wormy Stings		
Orchard No. 1 (York Imperial variety):				
27-31	DDT 0.8 lb. and 1 lb. (AKZ-40, 2 lbs. and 2½ lbs.) in 8 cover sprays ending August 17.....	96.4	0.5	3.1
32-36	DDT 1 lb. (25% DDT 4 lbs.) in 6 cover sprays (2nd to 7th) ending August 7.....	96.7	0.3	2.9
37	DDT 1 lb. (25% DDT 4 lbs.) in 4 cover sprays (2nd, 4th, 6th and 7th).....	92.5	2.3	5.2
38	DDT 0.25 lb. (25% DDT 1 lb.) and lead arsenate 3 lbs. in 7 cover sprays (2nd to 8th).....	90.6	0.4	9.0
39	DDT 0.5 lb. (25% DDT 2 lbs.) and lead arsenate 3 lbs. in 7 cover sprays (2nd to 8th).....	95.1	0.2	4.7
3, 11, 13, 18, 20, 26	Lead arsenate 3 lbs. in 8 cover sprays (six plots having highest percentage of clean fruit)	83.1	1.0	15.9
	Check trees, not sprayed after calyx spray.....	2.8	95.4	1.8
Orchard No. 2 (York Imperial variety):				
1	Lead arsenate 3 lbs. and lime 3 lbs. in 8 cover sprays ending August 18.....	88.2	0.7	11.1
4	Lead arsenate 3 lbs. in 8 covers and phenothiazine added in 2nd, 3rd and 4th cover sprays	94.5	0.3	5.2
5	DDT 0.5 lb. (AK-40, 1¼ lbs.) in 6 cover sprays (2nd to 7th) ending August 8.....	95.7	0.4	3.9
6	DDT 1 lb. (AK-40, 2½ lbs.) in 2nd to 7th cover sprays	99.0	0.1	0.9
7	DDT 1 lb. (AK-40, 2½ lbs.) in 2nd to 7th covers and 6 qts. Orthol-D oil in 4th to 7th covers	98.9	0.1	1.0
	Check trees, not sprayed after calyx spray.....	12.5	84.2	3.3
Orchard No. 3 (Stayman-Winesap variety)				
Eight cover sprays ending August 18, all plots				
14	DDT 1 lb. (50% DDT 2 lbs.).....	93.9	1.4	4.7
15	DDT 6 oz. (50% DDT 12 oz.), lead arsenate 3 lbs.	85.4	4.9	9.7
16	Lead arsenate 3 lbs.....	70.0	4.9	25.1
17	Lead arsenate 6 lbs.....	81.1	2.9	16.0
18	Lead arsenate 3 lbs., and Orthol-D oil 2 qts. added in 2nd to 8th covers.....	80.9	3.5	15.6
	Check trees, not sprayed after calyx spray.....	3.2	93.9	2.9

TABLE II
Duration of Effectiveness of Spray Treatment as Indicated by Percentage
of Live Entries Made in Apples Which Were Picked From Sprayed Trees
and Then Subjected to Attack of Codling Moth Larvae

Interval from time of spraying to picking (days)	Spray applied and percent of live entries				
	DDT ½ lb.	DDT 1 lb.	DDT 1 lb. and oil	Lead arsenate 3 lbs.	Lead arsenate 6 lbs.
Orchard No. 2 (Sprayed June 26, 1945):					
1	3.3	0.7		11.8	4.6
7	4.1	0.0		11.7	6.6
15	6.0	0.7		21.4	7.4
21	11.3	3.7			12.7
28	26.7	17.0		25.2	
35	41.7	11.6	21.4*	39.2	25.3
41	30.6	11.5	21.5*	25.1	15.5
Orchard No. 1 (Sprayed June 25, 1945):					
26		9.4	15.3**	33.6	25.9

*Orthol-D oil 6 quarts

**83% oil emulsion 3 quarts

TESTS WITH DDT AGAINST CODLING MOTH AND AGAINST HIBERNATING CODLING MOTH LARVAE

C. GRAHAM, Field Entomologist,
University of Maryland, Hancock, Maryland

This is the DDT era. The insect killing potentialities of DDT have been treated so glamorously by the press, that the average layman has been lead to believe that no insect can exist in the home or field where a few pinches of DDT have been distributed. It is hoped that the orchardists have not gleaned such misunderstanding.

We all recognize DDT as an effective insecticide against certain insects, but it is no panacea. It should be further recognized that there is much that is not known about DDT. Until much more is learned about its effects on plants and animals, it should be used cautiously. Do not use it when other known and tried insecticides can be used effectively.

The fruit grower must recognize that there is no short cut to codling moth control. Regardless of whether DDT or lead arsenate is used, the spray job must be thorough and the application must be applied on time if the worms are to be stopped. The amount of money spent for spray material is of no consequence in the control of worms if the spray is applied to the trees in the right manner and at the right time.

The use of DDT is recommended in all orchards where the codling moth problems are acute. However, there are orchards in Maryland where the old spray program has given good control, and, too, there are isolated blocks of apples throughout the state where there were no apples in 1945. There should be no codling moth problem in such orchards in 1946. Why invite trouble by using DDT in these orchards? In all instances where DDT is to be used, the directions furnished by your Experiment Station should be

followed explicitly. Your spray calendar will contain the very latest and best recommendations that are available. *Don't be persuaded to add to or take from these recommendations.*

Codling Moth Experiments—1945

A large block of Summer Rambo and Grimes Golden apples was selected for the test. All spray applications were applied with a stationary system by the owner. Half of the block of Summer Rambo received the regular schedule of five cover sprays of lead with three quarts of summer oil added to each 100 gallons of spray in the last three covers. The other half of the block received the regular schedule through the second cover. The next three applications contained three-quarters of a pound of DDT, three pounds of arsenate of lead and three quarts of summer oil.

Results

Treatment	% Worms	% Stings	% Clean Fruit
Regular Schedule	13	11	.76
DDT Schedule	.7	.7	98.6

The Grimes Golden block was handled in the same manner as the Summer Rambo, except seven cover sprays were applied. The DDT was added starting with the third cover and continued through the seventh cover.

Results

Treatment	% Worms	% Stings	% Clean Fruit
Regular Schedule	28	12	60
DDT Schedule	2.4	.5	97.10

Tests with DDT against overwintering codling moth larvae

During August, field crates were sprayed with different strengths of DDT and then filled with wormy apples and placed in the insectary. The larvae were examined October 20 and the following data obtained:

Strength of DDT	No. Larvae Dead	No. Larvae Alive
5%	19	0
7%	29	0
30%	68	0

Other tests made during the same period consisted of dipping roofing shingles in different solutions of DDT. A match stem was then placed between two of the shingles, thus forming a place for the larvae to spin up. The shingles were held together by a rubber band. The larvae were placed in a battery jar and allowed to spin up between the treated shingles. The results of the tests are shown below:

Treatment	No. Larvae Dead	No. Larvae Alive
3% DDT—emulsion	20	2
5% DDT—emulsion	9	10
5% DDT—oil	18	0
7.5% DDT—emulsion	12	12
10% DDT—emulsion	16	2
15% DDT—emulsion	12	0
Check	0	21

Corrugated paper bands were dipped in different strength solutions of DDT and placed around apple trees in August, and removed in October and the records made of codling moth larvae spun up. The results are shown in the following table:

Strength of DDT Used	No. Larvae Dead	No. Larvae Alive
1½%	11	23
2%	8	7
5%	11	1
7.5%	3	6
10%	12	14
30%	29	0
Check	0	31

Red mite population

Observation on red mite population during the harvest season indicated that more eggs were present in the calyx of the fruit and on twigs where DDT was used than on the plots receiving the regular schedule. However, actual counts made on the number of red mite on the foliage after harvest showed only a slight difference in any of the plots. No noticeable injury developed on any of the plots in 1945. Serious red mite damage developed on the DDT plots in 1944.

Discussion and Conclusion

Addition of DDT to the spray starting with the third cover proved more effective in controlling codling moth than the regular spray schedule.

The results obtained by treating picking boxes, shingles and corrugated paper bands with different strength solutions of DDT was effective enough in killing codling moth larvae to justify further work along these lines, especially in regard to the treatment of picking boxes, baskets, packing sheds, graders, etc.

The European red mite was not a serious problem in any of the DDT plots during 1945.

SPRAYING 800 ACRES WITH DDT

HENRY W. MILLER, JR.

Consolidated Orchard Company, Inc., Paw Paw, West Virginia

Most people believe that the days of great miracles were over many years ago and that no living people of today would ever see a first-class miracle. This belief was shared by the writer until my 1945 experience with DDT.

The Bible states that when Moses drew his host of Israelites up to the Red Sea, hotly pursued by Pharaoh and his army, the sea divided and every Israelite crossed on dry ground, after which Pharaoh and all his hosts were drowned by the returning waves.

For several years most apple growers of this great Appalachian terri-

tory, comprising Pennsylvania, Maryland, West Virginia and Virginia, have been hotly pursued by millions of codling moth. Our large mountain orchards around Paw Paw were no exception, in spite of their high altitude.

Figuratively speaking, we were fast approaching our Red Sea, with no apparent escape, a period when wormy apples would have little or no value and prices for good apples would not be high enough to cover our huge spraying costs. This situation, when fully developed, would have financially wrecked the industry.

Today I am convinced that a way has been discovered which can deliver us from this fearful dilemma.

This broad statement is based on my personal observation of Dr. Edwin Gould's experiments at our West Virginia State Experiment Station and a full-dress, 800-acre, commercial experiment by the Consolidated Orchard Company with DDT.

In February, 1945, the board of directors of Consolidated Orchard Company met in special session to decide on a spray program for the coming season. After a full and most solemn discussion, we unanimously agreed to use DDT, provided it could be obtained and applied under the direction of our State Entomologists, Gould and Sherwood. We were desperate because of a terrific carry-over of moths from the long summer drought of 1944.

The Company's bearing trees cover approximately one thousand acres, but after a serious May 4th freeze, it was necessary to spray only 800 acres, which had a fairly light remaining crop that would ordinarily be almost impossible to protect from worms in this area. A heavy population of over-wintering moth and a light apple crop is a bad combination.

For three years we had carefully followed the trend of moth population in two of our largest orchards by using bait pails. Five pails were carefully checked and counted each morning throughout the moth flight period in each orchard. These pails were kept in the same trees from year to year.

The following table shows total monthly catches of moth for a three-year period and indicates how our population was increasing, in spite of the fact that the spraying season was being continually lengthened, gallonage per tree increased and other costly material, such as oil and nicotine, added to fortify strong lead applications. Thousands of dollars were also annually spent for bark scraping, banding and other sanitary work. You will note from the table that our moth catch reached a disastrously high peak in May, 1945, and then took a nose dive in June and stayed down for the balance of the season.

Monthly Totals of Codling Moth Caught in 5 Pans—Imperial Orchards

Year	May	June	July
1943	294	69	336
1944	810	135	565
1945	1040	35	29

Monthly Totals of Codling Moth Caught in 5 Pans—Martin's Mountain

Year	May	June	July
1943	252	135	129
1944	260	101	483
1945	1496	25	13

Test catches of flying moth do not always denote the degree of damage at harvest time because of varying weather conditions, size of crop, amount of spraying done, materials used, timeliness, number of applications, etc.

All fruit from the two orchards named above was packed through one plant where pack-out records are carefully kept. We were particularly careful to determine approximate percentage of apples thrown out of U. S. No. 1 grade because of worm damage. Wormy apples were scarce with us until 1942 because our mountain orchards are comparatively isolated and heavy first brood spraying was annually practiced. A summary of pack-out records from 1942 to 1945, inclusive, showed as follows:

Year	Percentage of Tree-picked fruit damaged by worms	Comparative Size of crop
1942	2%	Normal
1943	11%	Normal
1944	22%	Heavy
1945	Less than ½ of 1%	Light

These figures are a rather good cross section of the Company's moth troubles because over 700,000 packed bushels of apples moved through our Paw Paw plant from 1942 to 1945, which had grown on the Imperial and Martin's Mountain orchards.

It is entirely unnecessary for me to elaborate on the seriousness of our situation in May, 1945. Most any grower with worm experience can see from the bait pail record that, barring some act of God like zero weather in July, we were headed for a crop of culls. Because of this crisis we did not hesitate to use the new and comparatively little known chemical, DDT, as soon as it could be obtained.

Our many difficulties in securing DDT to spray 800 acres is another story. Most entomologists kindly heard our story but sagely advised us to wait a few years. The War Production Board was sympathetic but they had a war to win and could not understand how such little worms could destroy much food.

Certain big chemical companies seemed anxious to see DDT tried on a commercial scale but washed their hands of any responsibility, in terrifying language on each package. These necessary but untruthful notices caused many of our employees to hesitate to handle DDT until those of us managing the job proved, by prolonged physical contact, that even the raw powder could be handled without the least discomfort or effect. Our

men soon learned that DDT is as pleasant to apply as pure water and about as harmless.

I know that many apple men are now tremendously interested in DDT and that they have many hitherto unanswered, practical questions in their minds. Because of this I am going to list here some most likely questions and answer them to the best of my ability, from our experience in 1945.

Question: Is it possible to control codling moth with light applications of DDT, quickly and cheaply applied?

Answer: DDT is no substitute for a good job of spraying. All foliage, twigs, and small limbs should be well covered. Trees should be heavily sprayed inside and out, just as in lead applications.

Question: Will DDT kill bees and other helpful insects?

Answer: Possibly, but so does lead. BETTER FRUIT has just published an article entitled "DDT Fails to Harm Bees." Dr. H. A. Scullen, Associate Entomologist at the Oregon State College Experiment Station, states that he has accumulated considerable evidence indicating that DDT used at normal strengths in pest control, will not cause serious damage to honey bees. Anyone interested in Dr. Scullen's statement, can find it in the November issue of BETTER FRUIT.

Question: How long is a DDT application effective against codling moth?

Answer: We found that the first application was deadly for only about two weeks but that each later application seemed to last longer than the preceding one, indicating that there was a build-up.

Question: Is DDT more effective when lead is added?

Answer: DDT was just as effective by itself as with lead in our orchards.

Question: Does DDT need a spreader or sticker?

Answer: We found that it seemed to spread better and last a little longer when used with one quart of summer oil per hundred gallons.

Question: Does DDT injure foliage?

Answer: We do not believe that it does unless excessive oil or bluestone is added. Our foliage was generally in a fine, green condition at harvest time.

Question: What is the effect of DDT on size and color?

Answer: Our size was normal for the season and the color and finish better than normal.

Question: Is there a greater danger of being attacked by Red Mite where DDT is used?

Answer: Yes. Red Mite built up in some areas of our orchards, at a fast rate but we were able to stop them with a straight application of 5

quarts of summer oil to 100 gallons of water. Comparatively cool days were selected for the application.

Question: How many applications of DDT did the Consolidated Orchard Company use in 1945?

Answer: Four. Two in the first brood, and two in the second brood.

Question: Did the Company use any other sprays for codling moth in 1945?

Answer: Yes. We put two 4-lb. lead covers on the first brood in May before DDT was secured. One partial application of 155 tobacco was also made at the rate of 2 lbs. per hundred with 2 qts. of oil between broods to head off a small peak.

Question: Would the Company have used these other materials if enough DDT had been available?

Answer: No, because DDT is far more powerful and is easier to apply.

Question: Will DDT settle out?

Answer: We found that the material used last year settled as quickly as lead. Good agitation is essential.

Question: Is DDT hard on equipment?

Answer: No. It is not a corrosive material and has no apparent detrimental effect on spray hose.

Question: Does DDT kill the flying moth as well as worms?

Answer: We believe that many but not all flying moth are killed by DDT.

Question: Does DDT kill full-grown worms after they come out of the apple and start their trip to heavy bark and other cover to spin up?

Answer: We believe that DDT does kill many adult worms as they try to move to cover, over leaves, twigs and ground, because almost no signs were found under bands and bark on check trees where early first brood worms were permitted to enter the apples, after which the trees were well sprayed with DDT. This new chemical is a contact poison so that non-feeding, adult worms are apparently as vulnerable as young worms.

CONCLUSION: This entire statement was prepared from our experience in the spraying of 800 acres with DDT in 1945. Full consideration was given to all suggestions and recommendations of our State Extension Service on the subject and, therefore, our entomologists deserve most of the credit.

We feel particularly indebted to Dr. Edwin Gould, Dr. E. C. Sherwood, and Dr. W. S. Hough for their great interest and valuable guidance.

Much credit is also due to the National Apple Institute, Appalachian Apple Service, and the West Virginia Horticultural Society. These

organizations did much good work with Government Departments, which directly resulted in a release of DDT for commercial experiments.

Statements contained in this article are based on our personal experience with DDT in 1945 and are not intended as recommendations to others. If interested in using DDT in 1946, consult your state entomologists.

Next to the atomic bomb, DDT is probably the most important by-product of World War II. Its possibilities for the benefit of mankind are probably only scratched. I stand with uncovered head in the presence of the most amazing development in insecticides of my time.

PHENOTHIAZINE OR DDT?

HARVEY B. RAFFENSPERGER, Fruit Grower,
Arendtsville, Pennsylvania

When I received the letter from Secretary Vierheller asking me to take part in this discussion I answered that letter by saying I thought he gave me a pretty tough assignment, but I could not let him down. Then, I received another letter from him and in that letter he said, "Don't be bashful, you're among friends," and that is the first time in my life that I ever was blamed for being bashful. So, here I am and take for granted he expects me to give our experiences with these two materials.

I find myself in about the same position as the man I heard recently who was working for the Government in the Foreign Labor Department. He said, I have to tell you the truth because I have not worked long enough with the Government to make lies smooth enough. So it is with me about these two materials, Phenothiazine or DDT. However, I assure you I have an open mind and I am not prejudiced against either one of these materials.

Last year I was at your meeting and told you we were going to be using some Phenothiazine and I would probably be back next year and tell you more about it. If you remember, I told you about that portion of Adams County we call South of Arendtsville and there was not more than one small truckload of U. S. No. 1 apples in the whole section due to codling moth. I was ashamed of that report, but believe you gave me credit for admitting it. I can assure you the story was exactly reversed in 1945 and we are proud of that fact and I can also assure you that this section had a lot more income tax to pay this year. Dr. Steiner deserves most or all of the credit for this progress.

In this section we have a grower by the name of "Bill" Oyler, the hardest working fruit grower in Adams County, and I mention this fact because we don't have too many hard working fruit growers in Adams County or elsewhere. When we speak of new materials doing a job we ought to be sure we had plenty of bugs to fight. Did "Bill" Oyler have a codling moth problem? Listen to this closely. Almost total loss in 1943 and 1944. There were caught in ten pails from the 12th of May to the 12th of June approximately 5,800 moths and 805 moths caught in a single night, May 23rd.

I was doing some spraying in that orchard in 1944 around 6:30 in the evening and the man helping me was killing the moths on my shirt very much like you kill flies. "Bill" was ready to sell the farm and go to the mountains where they are not bothered so much with codling moths, but something happened. Dr. Steiner had a plot in this orchard that was sprayed with Pheno-Lead and it came through beautifully. "Bill" said if Steiner can kill them, so can I. So in this year, 1945, he used Pheno-Lead in the second, third and fourth cover sprays and he sprayed the tops and outside from the tank with a No. 16 disc and then using two leads of hose and smaller discs sprayed from inside out. These applications were ten days apart. This was followed in ten days with Bordeaux-Lead, completing first brood. It was as near a complete clean-up as a man could hope for in one year with the condition he had and all the surrounding orchards as bad or even worse and that is only part of the story. I doubt very much if there was any better foliage in any Pennsylvania, Maryland, Virginia or West Virginia orchards and that covers a lot of territory. The apples had a wonderful finish, very solid and when brushed off looked like they were waxed. We had another orchard just close with 30,000 bushels of apples. In 1944 it was a total failure from codling moth sprayed with oil, lead and nicotine. This orchard was sprayed six times with Pheno-Lead with no signs of bad effects from the six applications, beautiful foliage, finish and all a grower could ask for.

We had blocks in this orchard sprayed with some of the former programs, particularly lime and lead, with the results exactly opposite to the Pheno-Lead. The counts after first brood sprays soon told the story. There were approximately 20 gallons per tree used in these orchards. When I visited some of the orchards in West Virginia and Maryland and they talked about using 50 to 75 gallons per tree I was wondering if we could get all the growers in Adams County to use that amount with Pheno-Lead where we would have to go to find some codling moth. We all know that is the way to clean up codling moth because the heavier the application, if it is properly distributed, the more likely we are to have the apples covered, which, of course, is necessary with any material.

Phenothiazine does not build up and we improved the combination by the addition of one pint Orthex. I found no objections to this last year. We also found that scab apparently did not transfer from the leaf to the apple while we were using the Pheno, apparently making it a pretty good fungicide. We also had apparently no lead injury when using the combination, making it look like a good buffer for lead. We had approximately forty users of Pheno and there were approximately 80,000 lbs. sold, mostly in Adams County.

There is never a good material that doesn't have some bad features and I know you are saying why doesn't he say something about that. I have tried to tell you the Pheno merits as I see them and now the same about the only two bad features. Personally, if we could eliminate these I would look no further. The cost of the material over which we have no control.

It was used at two pounds per hundred gallons with three pounds arsenate of lead. It cost approximately 67c per pound. What the price for 1946 will be I do not know as yet. You all know the cost of arsenate of lead and you can all figure or at least I hope so. If you have ever used lead, nicotine and summer oil, you will find the cost approximately the same. Does Pheno burn the foliage? No. Does Pheno burn the skin? No. It apparently absorbs all the oil out of the skin, making it feel very similar to a sunburn.

It was my business to get around to as many growers as possible and see that they were getting the material mixed properly and I was called everything but what you can find in the Bible, but as I am not very big I simply had to take the abuse and hope for the best. Some of the worst abusers, after they started picking the fruit, asked me kindly just to forget what they said this summer. In the first place, no one took the proper precaution until after he was burned and it works something like locking the barn after the horse is gone. We finally got a solution made up that was applied pretty heavily to the part of the face that apparently burns the worst and plenty of the boys did not mind it.

I, personally, saw "Bill" Oyler after spraying the best part of the week, take his old red handkerchief on Saturday evening wipe off this solution and it was hard to see that he had been spraying. It is a fact that some people burn more quickly than others. As far as I am personally concerned, it never bothered me while mixing or spraying. We had 40 men who sprayed and mixed examined after each application and the men doing the mixing double checked with no bad effects. The mixing was, of course, the worst. That may be eliminated in 1946. I have seen this material used in 1942, 1943, 1944 and 1945, two extremely dry and two extremely wet years, and the results were all good where the job was thoroughly done. I also want to mention that in all the orchards where Pheno-Lead was used the drop of the fruit was exceptionally light.

I do not suppose anyone questions the killing power of DDT, if a good job is done. The thing that bothers me most is that it kills too much. I remember that old saying, "the cure might be worse than the disease," and along that line what has happened that we have observed? Does all DDT on the markets work and give results?

Does the grower know the difference?

Do we know if DDT will harm the working man?

Why did some blocks sprayed with DDT in 1944 have no apples in 1945?

Do we know right amounts in combination to use without injury?

Do we know the effects of certain combinations in wet and dry years?

Do we know what caused the leaf injury on so many trees, especially when used in combination?

Do we know what caused the heavy dropping of fruit?

Do we know what caused the fruit to have a sunburned appearance?

We do know it apparently killed most of the parasites. We do know it does build up.

Can the residue be removed to be able to sell the apples?

Do we know why so many wooly aphids on blocks sprayed with DDT?

You can readily see my answer. Probably a good material but surely not ready to be broadcast. Personally, I feel we have enough materials at our command to combat most all insects and diseases and what we need most is someone to tell us what to use in wet and dry weather. If I had one of these so-called war orchards and had a bad infestation of codling moth, DDT. If I had a very small block surrounded with fields and a bad infestation, I would try DDT. If I had a good orchard with a bad infestation, Pheno.

I personally, asked some salesmen if they had a good orchard and knowing all they know of DDT yet, would you use a full program of DDT? The answer was "No." Why do I say this? Because it is my firm belief after watching these two materials closely, used as they were used in the past, that if you would take two blocks of trees very similar and use the same materials on both except using DDT for worm control on the one and Phenothiazine on the other, at the end of say four years, the Pheno block will produce many more apples, better foliage, more apples stay on the trees, apples more desirable to the public, and this simply is anyone's guess. I am willing to go on record with that statement even though I know it is going to be proven. We are all aware the day is fast approaching when the grower has to produce the best looking apples possible if he is to stay in business. There is nobody in this world wishing more sincerely for DDT to work out better than Pheno than I do because we know it does build up and, therefore, has more killing power and if it proves to show no bad effects on the working man it is more desirable from that standpoint and, of course, the cost of the material. But there are too many ifs in my opinion to plunge the whole team into the dam in 1946.

QUESTION BOX

Submitted by Growers

How control tarnished plant bug and red mite?

Late research indicates that tarnished plant bug may be controlled by use of DDT, $\frac{1}{2}$ pound actual DDT per 100 gallons of spray. This insect causes cat-faced peaches. *Red mite* control may become more difficult where DDT is used, although the season also affects the severity of injury by mite. There are evidently two species of mite that cause injury to fruit trees. Such materials as DN-111, using $1\frac{1}{4}$ pounds per 100 gallons, or Genicide, 1 pound per 100 gallons, applied beginning with third cover spray, gave effective control of mite.

Which is better—parasites or DDT in Oriental peach moth control?

Both have given good results. As yet, the most effective one has not

been determined, since the trials have not been conducted long enough to show average results.

REPORTS OF COMMITTEES

The Nominating Committee submitted the following, which was adopted unanimously, without discussion:

President—Lloyd Balderston, Colora.

1st Vice-President—Marshall T. Heaps, Cardiff.

2nd Vice-President—John P. Caspar, Hancock.

Secretary-Treasurer—Albert F. Vierheller, College Park.

Executive Committee: A. Lee Schrader, College Park; Stanley M. Fulton, Hancock; William C. Main, Hagerstown; D. Eldred Rinehart, Smithsburg; Sherman B. Waddell, New Windsor; Russell C. Shaw, Stewartstown (Pa.); J. Andrew Cohill, Hancock; G. Rust Canby, Silver Spring; R. Sam Dillon, Jr., Hancock; William T. Delaplaine, Frederick; Dwight T. Walker, Mt. Airy.

Director to Maryland Farm Bureau—Marshall T. Heaps, Cardiff.

Delegates to Maryland Farm Bureau—E. D. McCain, Frederick; G. Rust Canby, Silver Spring. Alternates—Phillip W. Beamer, Westminster; J. Kieffer Funk, Hagerstown.

Delegate to Maryland Agricultural Society—D. Eldred Rinehart, Smithsburg.

Directors to Appalachian Apple Service—E. D. McCain, Frederick; Lloyd Balderston, Colora; G. William Gardenhour, Smithsburg; William T. Delaplaine, Frederick; Stanley M. Fulton, Hancock.

The Auditing Committee reported that the records and books of the Treasurer were in proper order with all funds accounted for.

RESOLUTIONS

The Resolutions Committee submitted the following resolutions, which were adopted without discussion:

WHEREAS, The State Labor Committee and the University of Maryland Extension Service have performed such valuable services in securing labor for farmers, be it

RESOLVED, That the Maryland State Horticultural Society expresses its thanks and gratitude to the State Labor Committee; Dr. T. B. Symons, Director, University of Maryland Extension Service; Paul E. Nystrom, Deputy State Director of Farm Labor; and the County Agricultural Agents of Maryland for their assistance and interest in our farm labor problems.

WHEREAS, We realize the inconvenience and sacrifice experienced by our guest speakers in leaving their work to speak before our Society during our meetings, be it

RESOLVED, That the Maryland State Horticultural Society expresses its appreciation of the courtesy of these speakers in coming before the Society to give us the benefit of their knowledge and experience, thus contributing to the value of our meeting.

WHEREAS, Our accommodations during these meetings have been excellent, in spite of present conditions, be it

RESOLVED, That the Maryland State Horticultural Society expresses its gratitude to the management and staff of Hotel Alexander.

WHEREAS, Marketing conditions for fresh apples appear, for the near future, rather uncertain, and the need for grower cooperation is sure, be it

RESOLVED, That the Maryland State Horticultural Society investigate the facts and possibilities regarding grower-controlled cooperative fruit processing plants, and report these findings to the Society.

WHEREAS, An Experimental Field Laboratory located at Hancock, and a Chemical Laboratory located at Hagerstown have been commissioned to serve the fruit growers of Western Maryland, be it

RESOLVED, That the Maryland State Horticultural Society expresses its deep gratitude and appreciation to His Excellency, Governor Herbert R. O'Connor; Dr. Harry C. Byrd, President, University of Maryland; Dr. Thomas B. Symons, Director, Extension Service, University of Maryland; the Commissioners of Washington County; and the Growers' Committee for their efforts and cooperation which made possible the establishment of these Laboratories.

WHEREAS, The Maryland State Horticultural Society recognizes the importance of the services rendered the fruit growers of Maryland by Appalachian Apple Service, be it

RESOLVED, That the President appoint a Committee composed of three fruit growers to work toward a plan to secure 100 percent grower participation in support of this organization whose function is to publicize the uses of apples.

WHEREAS, The national organizations representing the fruit growing industry have given most valuable services to the industry during the past year, be it

RESOLVED, That the Maryland State Horticultural Society expresses its gratitude on behalf of the fruit growers of Maryland to the secretaries and other officers of Appalachian Apple Service, National Peach Council, National Apple Institute and International Apple Association for their fine work.

WHEREAS, God in His infinite wisdom has called from our midst, these members:

Edgar A. Leatherman

Frank A. Weihe

James A. D. Garber

BE IT RESOLVED, That this Society expresses a deep and sincere sympathy to the families of the deceased, and that this resolution be entered in the permanent records of the Society.

QUESTION BOX

Submitted by Growers

How Control Peach Brown Rot and Bacterial Spot?

For *brown rot* control, knock mummies from trees at pruning time. Cultivate early in the spring to bury mummies, or remove mummies from under trees, if practical. Proper timing of sprays and thorough coverage are essential. Use sulfur in the brushing machine at packing time, arranging the machine so that the sulfur is applied after the brushing. Every peach grower should have a dusting machine for quick tree coverage with sulfur where necessary. Pre-cooling of fruit in shipment is helpful. For *bacterial spot* no dormant spray material has given results. There is a varietal difference in susceptibility to bacterial spot. About the best we have at present is the use of zinc sulfate in summer sprays as outlined in the spray calendars, using 3 pounds zinc sulfate per 100 gallons spray, or more in cases of heavy infection.

Is 1-75 lime-sulfur too weak for apple scab control?

No. Even 1-100 concentration will control scab, but the spray must be applied at right time or times to keep foliage covered during periods of scab spore discharge.

Compare zinc hydrate with lime as a safener.

There is a commercial zinc hydrate material, which is claimed to be more effective than lime as a safener to prevent lead arsenate injury. In peach sprays the use of zinc sulfate is largely for control of lead arsenate injury. Bordeaux mixture made up of either lime-copper sulfate or zinc sulfate-copper sulfate seems to give the same results. Hard or soft water may be a factor in spray injury in a particular orchard.

THE GROWER AND GROWER SERVICE ORGANIZATION

STANLEY M. FULTON, Fruit Grower,
Hancock, Maryland.

We have three important service organizations serving the Appalachian Fruit Belt. They are: National Apple Institute, National Peach Council,

and the Appalachian Apple Service. The first two mentioned are national in scope. The last serves only the four state area of Virginia, West Virginia, Maryland and Pennsylvania.

Since we are more closely associated with the Appalachian Apple Service, I will point out in some detail the work this organization has been doing. There are seven specific things that stand out:

1. Securing fair prices for our apples that went to processing plants: All this has been done during the war years under complete governmental controls. By organizing our processors and growers into a cooperation which has been unprecedented and complete, the Appalachian section virtually established Governmental prices for processing apples. The government was so favorably impressed with this belt's degree of cooperation between growers and processors that our statements of fair prices were accepted almost without change, all three of the wartime years. This was because the combined judgment of our processors and growers was fair and backed by complete factual evidence.

2. Work on ceilings: The Association brought our members of the apple advisory committee together with our growers; discovered the needs and wishes of the growers for the guidance of the industry advisory committee-men in working with OPA. We work closely and continuously with OPA and Department of Agriculture throughout this period of controls, keeping them in touch with our situation by information supplied, visits to this section and other means. A considerable part of our job has been to interpret these ceilings to our growers. For instance, probably only the larger growers would have known about the 10c additional allowed Shipping Point Distributors, except for our bulletins. In several other apple belts, most of the growers never understood this clearly and lost 10c per bushel thereby.

3. Moving "little apples" in the jam of early 1945: This is fresh in the minds of most growers; the dam-up of several million bushels of these little apples. Without excessive modesty, we say that we organized the efforts which resulted in our processing plants keeping open longer than they had intended or reopening after they had closed for the season; purchasing some hundreds of thousands of bushels of this fruit beyond their original plans. We had a large part in securing governmental purchase programs for export and School Lunch, also.

4. Work on Labor: This has been one continuous job. The Association aided in bringing imported labor to this belt by conferences at Washington and elsewhere. We have worked steadily on wage-hour law exemption for agriculture. This is now before Congress and we have sent literally hundreds of letters, wires, etc., and made personal appearances before two Congressional Committees on this. The growing campaign by Union Labor for enforcing organization on our truck drivers and through them on all agriculture has been another real job for us. We chairmanned the organization of the All-Eastern Food Producers Council, which is uniting the efforts of approximately 40 agricultural associations against this

enforced unionization, with highly satisfactory results already showing. This does not mean that Appalachian has ceased work in this field. All of our Congressmen and Government officers concerned know all the time exactly where our organization stands on these questions.

5. The advertising and promotion work has been carried on to the extent necessary: the Apple Recipe Service which is used by dailies all over The East and South; our movie, "Apples: All-American"; our apple booklets; and publicity, notably the several pages in July National Geographic Magazine.

6. The work with the retailers and wholesalers: As usual, we have kept a continuous flow of posters, grocers apple books and similar sales aids going out to the trade, both wholesale and retail.

7. Information to growers: Members are familiar with our bulletins; have formed their own judgment as to their value. They require a considerable amount of time and work.

The work being done and the money spent to promote competing fruits should be given some consideration since we are in a competitive market. To emphasize this competition, I will tell you how much money is being spent by other states for apples as well as oranges, grapefruit and lemons. Compare this 14/100 (one-seventh) of a cent a bushel by Maryland growers with the amounts paid by these competitors of ours:

Washington State—1½c per bushel: over ten times our average.

Florida—Oranges 2c per 1¾ bushel box, or 1¼c per bushel. Grapefruit 3c per box.

California—Oranges 7c per box or 5c per bushel. Lemons 13c per box or 9½c per bushel. California will spend \$1,000,000 on advertising lemons alone this year.

Michigan—1c per bushel on all apples, under state tax: yields Michigan about \$40,000 per normal season.

A careful analysis of these figures will show we must wake up and spend more money for promotion before we lose our market.

THE FARM LABOR SITUATION

PAUL E. NYSTROM, Deputy Director of Farm Labor,

Extension Service, University of Maryland, College Park, Md.

One of the biggest hurdles for orchardists and other farmers in 1946 is the continued shortage of farm labor. Economic prospects are reasonably bright, at least judged by prewar standards. Experts freely predict a reasonable farm price level—of within 85% to 90% of the wartime highs. Demand for farm products by consumers, both at home and abroad, will be good. But the big fly in the ointment is likely to be the difficulty of getting crops harvested because of short supplies of farm labor.

The same conditions which give cause for some optimism on the economic front make for some pessimism on the manpower front. Farm prosperity is closely tied to industrial employment. Reasonably full employment in industry seems assured—unless strikes retard the economy too greatly. There is no one factor that will do more to assure farm prosperity than full employment in industry. By the same token there is no one factor that will do more to assure labor shortage on farms than full employment in industry.

Although there may be some communities in Maryland in which the farm labor situation may ease somewhat in 1946, generally the situation is likely to be more critical than at any previous time.

A number of factors point toward this conclusion, including the following:

1. Former farm workers in war plants are not returning to farms. Many have acquired new skills and when displaced as war plants shut down, they are drawing unemployment compensation benefits while seeking new jobs at the same skills before being willing to accept jobs at lower skills and lower wages.

2. Unemployment in industrial areas which had been predicted following V-J Day and which was expected to help relieve the shortage of farm labor has not materialized. Compared with estimates of 8 to 10 million by the year's end, according to official estimates there were less than 2 million unemployed.

3. War veterans who had been expected to relieve the shortage of farm labor are not returning to farm jobs.

4. Since V-J Day there has been an exodus of farm labor from farms due to relaxation of manpower controls. This has resulted in a net loss of farm labor, especially year round labor.

5. According to present plans, all prisoners of war will be returned to their homeland prior to April 1, 1946. Six thousand prisoners of war had been employed on Maryland farms and in canning factories in 1945. Their loss will make a tremendous hole in the labor supply. Curtailed supplies of canning factory workers will result in competition of cannery workers and farmers for the available supply of labor, perhaps at higher wages.

6. Fewer Bahamian and Jamaican workers will be returned to Maryland due to curtailed appropriations to finance their importation.

7. With the ending of the war, the patriotic incentive no longer exists for townspeople to volunteer for farm work. Large numbers of such workers who had been available in previous years will be removed from the farm labor force.

8. The direction and control of the migrant movement along the Eastern Seaboard that was possible during the war years will diminish and the

migrant movement may become more chaotic and uncertain in 1946. During gasoline rationing, the issuance of identification certificates by County Agents which were exchanged by migrant crews for gasoline coupons made possible some direction and stabilization of the migrant movement which will no longer be possible with the end of rationing.

9. The supply of farm machinery in 1946 will be inadequate to meet demands of farmers desiring to mechanize as a means of helping to meet the labor shortage.

10. The situation is deceptive in the winter months which is normally the slack season. The full impact of the situation will not be felt until the farming season opens up in the spring.

In view of the tight farm labor situation, what is the way out for orchardists and other farmers? The following recommendations are made:

1. Production plans must be made not only in terms of the anticipated price and market prospects but also of the prospective labor supply.

2. Every effort must be made by orchardists and others to retain the small supply of year round labor still available on the farm.

3. The maximum amount of efficiency will be necessary in all operations in the orchards.

4. Labor saving devices and practices and techniques in all farm operations to make most effective use of available labor will be imperative.

5. As soon as danger of frost is over and the size of the fruit crop becomes apparent, each orchardist should immediately begin individual recruitment efforts to line up harvest labor and not rely upon governmental recruitment efforts which are likely to be inadequate.

6. Patterns of employment should be built up by orchardists even to the extent of recruitment of labor in other areas so as to develop sources of labor not only for 1946 but also for future years when governmental recruitment efforts may be discontinued.

7. Orchardists should not rely too heavily upon labor imported from abroad for such supplies will be inadequate and they must be utilized for the most part as "flying squadrons" for peak operations and will be severely rationed among producers who first exhaust all other sources of labor.

8. For the "long pull" the farm job must be made more attractive so farmers can more adequately compete with industry for labor. This will involve improvement in housing and working conditions and an increase in productivity of labor by mechanization and greater efficiency, work simplification and elimination of waste motion, and elimination of as much drudgery as possible from the farm job and farm home.

Despite war time handicaps of all kinds and with a labor supply reduced

by 20%, farmers achieved miraculous results by increasing food production during the war years to previously undreamed-of heights. This can be done, too, in 1946. It is possible as the year progresses that the labor picture may brighten. But it is a wise orchardist who plans for the worst and hopes for the best.

PUTTING THE YARDSTICK ON FARMER ORGANIZATION

CARROLL R. MILLER, Secretary, Appalachian Apple Service,
Martinsburg, West Virginia.

"Farmers can't get together on anything" has been said so often for so many years that it is almost an axiom. Chesley Haden, eloquent Virginian, wrote: "The curse of the tiller of the soil has been his lack of cooperation. He has brains, or he could never have survived the ravages of time and fire and flood and still feed the world. . . . But a new dawn is breaking around that rugged individual. He is learning that he must cooperate, or perish."

Farmers are learning. Membership in farm organizations is touching new highs, although the nation's farm population shrinks. Dues are being upped slowly from the pathetic \$1 per year or so which was the scale for a half-century. Farmers agree to the trite, "This is an era of organization." Most farmers are doing some adjusting of their thinking and practices to fit. Are they adjusting fast enough, and in the right ways, to meet today's demands?

A direct kind of answer comes by comparing farm organizations with others of the same basic type:—people, rather than merchandise:—the church; lodges; labor; democratic government itself. All these follow the same basic mechanics in their organization:—the individual to the "local" chapter in which each member is to participate actively and frequently:—thence to state; to region; to the national and/or international top office: a straight-line organization, bottom to top, with every unit geared to the single driveshaft. We have yet to locate a comparable organization that has stood the test of time which is not built on this classic frame.

How does agriculture's organization today compare? There are hundreds—perhaps more—of organizations of agricultural people:—county associations of "straight" farmers; county groups by crops—fruit growers, stockmen; state societies and associations of all these; and national and international offices. At that, there are not enough in many sections. There are plenty of big blank spaces over the country.

A prime flaw in agricultural organization is the lack of collaboration. The hundreds of organizations are hung all over the continent-wide vehicle. Some work steadily, month by month. Most come to life only a few times a year; for a meeting or so; then lapse in dormancy and dead-weight. Most of them, in numbers, pay no attention at all to what the other farm organizations are doing. How can they? Their officers are usually volun-

teers, snatching spare time for this from their main job and income: or the too-busy county agent is pressed into management as "secretary": salary, nothing or thereabout. Agricultural organization is blighted by the prevailing belief among farmers that they can get their organization work done by somebody without cost to themselves.

Compare this with today's top organization. What would the church be if ministers' salaries were paid, in part or whole, by Government, as is the county agent's? Or labor union secretaries were paid by Government, or by the employers? The fatal weakness of this is self-evident. There can be no effective farm organization until farmers recognize, and act upon, the stark fact that organization must be of themselves, by themselves:—that in organization as in all else, you do not get something for nothing.

The "upper" units of farm organization are at hand, and with little trouble can be geared to the central driveshaft. Most states have organizations of the farm commodities important in that state. Organization by commodities is a proven essential. The bricklayer is not interested in meeting week after week with meat-cutters, so unions build locals for each. A fruit grower is not likely to attend meetings of grain growers, or cotton producers. So units all along the line, local, state and national, are necessary for each major commodity. The "higher" units are mostly at hand now.

The "local" unit is the weakest link in the agricultural organization chain. It is also the most essential link. District or national offices can, if needs must, be coupled directly into locals. But nothing except the intimate local unit can couple to the individual. Can you name a lasting, country-wide organization that worked from a national headquarters direct to individuals? The corridors of time are littered with the wreckage of such attempts. Growth must be from the grass-roots up; not from the top branch down. Farmers ought to be the first to recognize that natural law. Only in frequent meetings can interest and enthusiasm be generated: the grower learn of work being done; how his money is being spent; and himself be a part of the work. Frequent meetings mean nearby meetings; and mean programs of merit. Programs of merit and frequent meetings mean work—lots of it. That means a well-paid secretary, full time or part-time. The same answer comes out:—the essential local unit and a secretary paid by the growers to work, on their problems, uninhibited by government regulations, lack of time, or other restraints.

Few indeed are the sections that meet this prime need. "Straight farming" comes close to it in a number of states; with the farmers' organization paying part of the salary of the county-unit secretary. But in the other commodities—fruits, vegetables, milk, poultry—the lack of efficient county or 2-county local units is the rule. The few notable exceptions prove the practicability and the value. Again to compare: where would the church be with only one pastorate in a state; one lodge or one union chapter in a district?

This blue-print may seem expensive and cumbersome. It is both. So are

the sprayers and costly spray materials required for pest and fungus control. But we had to have them or go out of business. Is the farm organization sketched here really necessary?

The problems piled up in the farm path just ahead are big. To us, three stand out:—coming competition, governmental controls, and labor's campaign to unionize farming.

Coming competition points to required better packs of better foods, at increased cost; with prices, as normally, unpredictable and uncontrolled. Diligent, expensive research and pilot work alone can bring the right answers to these. Can any one farmer arrange and finance a competent program for this?

Government's intervention in business will increase. No less an authority than Winston Churchill calls this the trend of the world today. Agriculture may not be able to stop it; but can divert it to the least harmful, or most beneficial, channels—if agriculture is well enough organized and prepared.

Organized Labor is hard at work on the unionizing of Agriculture:—the last big industrial field unorganized. The campaign is well-planned, well-financed and well-manned. House of Representatives Select Committee said in Report 1210, Nov. 16, 1945:—"In recent months there has been a concerted drive . . . to organize agricultural labor . . . particularly acute in Florida, Texas, California and Idaho." Producers of fruit, vegetables, poultry and milk along the Atlantic seaboard have been harassed since May 15, 1945, when Teamsters Unions of New York, Philadelphia and Newark mailed notice to all concerned that hereafter trucks would not be unloaded unless the driver held a union book;—the farmer and his son only excepted; said openly that the other terminals will follow suit shortly. In the Walker-Gordon dairy case, Teamsters Union leaders stated that their proper province includes every man on the farm who handles machinery;—milker, incubator, tractor, what-not, as well as truck drivers; and included every farm product as soon as it reached the public highway.

This unionizing campaign deserves some study. It shows, perhaps more graphically than the other problems, the farmer's need for efficient organization—and our present shortages therein.

Most farmers disapprove and reject this enforced unionization. The farmer has no liking for investing a year's work, worry and money, only to have a strike called at harvest time which can completely ruin his year's work. A strike in an under-roof plant making "staple" items usually means pulling the switch and stopping production lines for a period; then re-starting. A strike in a lettuce field or a peach orchard usually means total loss to all:—the grower loses his year's livelihood; the worker has no job to return to; and the consumer loses the food.

The grower, operating under Nature's weather whims, knows he cannot operate successfully on a 7-hour day or 40-hour week. He knows he cannot shut down his plant and wait, when prices drop below the profit-level, until the market "cleans up" and scarcity drives the price up again. Farm food

perishables must be marketed when mature, almost within hours; whether the markets are 10 cents and glutted or \$3 and bare. The grower has practically no control over prices he receives. He rejects, from costly experience, having urban type wages and overtime thrust between him and the slender profit-margin that has been his over the years:—symbolized by the 3-cent per bushel average yearly profit of West Virginia apple growers from 1938 through 1941. Margins like that do not allow overtime beyond 7 hours, nor double time; nor workers idling at urban union scale wages while rain stops work, days on end.

For these and other reasons farmers reject unionization as it is being attempted; reject it so emphatically that in the central and north east, sixty-six farm organizations formed the Food Producers Council; in the west, Associated Farmers; and other associations.

This does not by any means point to a class-struggle, farmers against labor or vice versa. The farmer recognizes that the urban worker is his biggest customer; that when labor has good wages, it eats better—to his profit.

The farmer recognizes that the workman, like himself, has the right to organize; that every man worth his salt will battle to better his and his family's lot:—better wages, better working conditions, better living conditions, housing, medical care, education. Organization is a proved tool in securing these. Growers organize among themselves for about the same ends. So there is no quarrel against unions as such. The objections are (1) to forcing on agriculture today's union practices and methods, which were built to fit urban, under-roof plants working in non-perishable staples; (2) to the ways these are being advanced.

There is another large objection. Farmers want free markets for food. Of the four sections of the food business, three are already rather tightly unionized:—Processing (canners, meat packers, storages, etc.); Transportation (with the railroad, Maritime and Teamsters Unions, etc.); and Distribution, in which wholesalers' staffs are highly organized, and retail clerks in most larger cities. That leaves only the fourth food section, production on the farm, relatively unorganized.

By their absolute control over the wholesale distributor's staff unions are doing some worrisome things. In Philadelphia, union leaders fined 14 wholesalers \$100 to \$400 each for remaining open on the 2-day V-J Day holiday President Truman suddenly declared in August. Much fresh produce was on hand or en route from farms when the double holiday was declared. The wholesalers decided to stay open to avoid heavy food spoilage; received their stiff fines shortly afterward, and paid promptly. Otherwise . . . no salesmen or porters on hand the next morning.

With three of food's four sections well unionized, the principle of free markets for food is jeopardized. There is concern about that unbelievably powerful club now shaping in the hands of labor chiefs:—control over the

nation's food. This can mean starvation; the power of life and death; a power granted only to government, sparingly, and with careful restrictions.

Yet with some more organizing of farm help, labor leaders, who are responsible to no man nor thing, could stop all food movement at 4 o'clock of a Tuesday afternoon, exactly as with coal, autos or meat; assuming that the members follow, as they have heretofore, their leaders' passionate, planned propaganda.

Four-fifths of our people today are urban; must have food brought to them, day by day. We are vulnerable on the food front. Judicious use of the threat of complete food stoppage is by far the most powerful of all clubs. There can be little real resistance to it. Government and panic-stricken public alike could do little except yield; for a gnawing stomach, or fear of starvation, know only one thing:—Get Food! And we are not "seeing things." Quoting again Report 1210 to the House:—"Unless Congress acts * * * the Nation's food supply will become a pawn in the hands of labor organizations."

Just what is Organized Labor? Union membership stands now at about 14 millions. It may be reasonable to assume that each of these, through family ties, sways another vote, for a 28-million total. Our national elections recently have brought out from 50 to 60 millions of votes. That estimated 28 millions is 50 percent of 56 millions. Organized Labor may have close to 51 percent of a casual election.

Twelve of the largest unions have assets of \$164 millions. CIO has just contracted with the 3 big radio networks, NBC, CBS and ABC, for full sustaining programs, with which to bring the public to their way of thinking; a competent public relations program. The unions have an estimated quarter-million officers and employees, part or full-time. They have large, competent and enthusiastic research and planning divisions, who explore, day in and day out, every possibility for the betterment of the working man and unionism. These planning sections are heavily under the influence of the Karl Marx school. They delve in the fascinating economics of building a better world. So it is to be expected that their recommendations will be strange, revolutionary and perhaps destructive to farmers in general. And because their plans must be approved by their top officials who are pretty practical and hard-headed; these work-plans must be well reasoned and sound from the unions' viewpoint.

We detail this because agriculture has practically no comparable corps of trained planning enthusiasts:—working by day and arguing by night for the growers only; not for Government nor for supply manufacturers; but paid by and working, without restrictions or inhibitions of any kind, for the growers: exploring and testing every possibility to improve production and distribution; to increase our markets, our effectiveness with Government; with our labor; and such problems. "World War II was won by scientists" is a fairly accurate statement. The best planners will win today, other things being equal. Agriculture is not planning effectively, by comparison.

Faced with problems as mountainous as these, only effective organization can provide the right answers. Effective organization requires of farm people—as it did of church people, politicians, lodges and labor—shirt-sleeve work, and money. The classic blue-print is at hand:—locals, by commodities, straight through to the impressive voice of all agriculture from the top office. Are farmers ready to work hard enough to obtain this?

HANDLING ORCHARD SOILS AND COVER CROPS IN NORTHERN MARYLAND

CHARLES O. DUNBAR, Research Associate,

University of Maryland Field Laboratory, Hancock, Maryland.

The subject of Orchard Soil Management reminds me of an occasion a few years ago when I was invited to attend a fruit meeting in another state. A day or two before the meeting I decided to try out the talk on the family setter dog so went up to the attic. I had just started when in walked our 4 year old daughter who sat down to listen. When I had finished, I wanted to know how things impressed the daughter so I asked, "What did Daddy just say?" Her reply was "Mr. Chairman" and "The soil gets worse and worse."

The question is: "are our own orchard soils getting 'worse' and 'worse' or is our soil management program one in which we are really making our orchards soils better?" Most of us are trying to make them better but, unfortunately, few of us are actually succeeding in doing this.

We give the trees a ring application of nitrogen fertilizer and perhaps some of us put on a broadcast application of 200 lbs. per acre of superphosphate on the sod middles. We forget that our fruit crop removes other materials from the soil. The small application of superphosphate is all right as far as it goes but it does not go far enough. What we wish to do is to maintain the organic matter content of the soil and the cheapest way to do it is to grow heavy cover crops or sods in the orchard. Drawing in mulch material from outside the orchard and spreading it under the trees helps but, after all, this is expensive so why not grow it right in the orchard?

The usual amount of cover crop or sod which is grown in the orchard is not sufficient to maintain soil organic matter to say nothing of increasing it. As the trees grow older, because of shade and moisture competition of the tree roots we find less and less amounts of cover crop and sod. We cannot remove the shade factor and tree root competition but additional fertilizer will usually increase the tonnage of the cover crop quite considerably.

All grass sods will respond to nitrogen and legumes will usually respond to phosphorous and potash. Both grasses and legumes will usually benefit from lime if this element is low. Because of the great variation in individual orchard soils, it is impossible to give blanket recommendations for

all orchards, but it is a simple matter for a grower to try out lime, nitrogen, phosphorous, or potash on a few rows or tree spaces. The response in many cases will be surprising.

A number of growers are using phosphorous alone for fertilizing their rye cover crop. In this case, almost without exception, a nitrogen fertilizer would give a much heavier growth of rye. Not that the phosphorous fertilizer was wasted for it probably wasn't, but nitrogen was the element most needed. After its nitrogen need was satisfied, then the rye might have responded to phosphorous or other elements.

In the case of a legume cover such as clover or alfalfa, money for nitrogen would probably be wasted and instead either lime, phosphorous, or potash or perhaps all of these should be applied.

In addition to not using enough of the right kind of fertilizer, another common weakness in our orchard soil management program, particularly with peach orchards has been to sow a rye cover crop TOO LATE in the fall. Rye is one of the best peach cover crops, but late seeded rye does not stool out well and the following spring it shoots into head before it has made much tonnage. It is true that we are busy with borer control or harvesting early fall apples but let us try to get our rye cover crop sowed between August 15 and September 10. An early sowed rye cover crop heavily fertilized has actually produced more than 10 tons per acre of green manure. Rye seeded October 1 will produce less than 2 tons per acre. Let's not spend good money for cover crop seed and then sow it at the wrong time.

Cover Crops Worthy of Trial

Peach Orchard: Winter rye sowed early and heavily fertilized with nitrogen and perhaps complete fertilizer. In northern areas, Rosen rye makes the most tonnage but Abruzzi rye makes a more rapid ground cover and may be best for southern localities.

A mixture of (per acre): 8 lbs. crimson clover, 8 lbs. winter vetch, 6 lbs. winter rye, 3 lbs. golden millet. Sow on firm seed-bed between August 1 and September 1. Cultipack or roll after seeding. Keep lime up and use 0-20-20, 0-12-12 fertilizer. If soil fertility is very low, 5-10-10, or 3-12-6 may be advisable. Do not sow in time of drouth.

Apple Orchard: A mixture of (per acre): 1½ lbs. of Ladino Clover, 6 lbs. Meadow Fescue. Sow in April on firm seed-bed, cultipack or roll both before and after seeding. Use lime, phosphorous, and potash for fertilizer.

If we maintain our apple orchards in sod, do not wait until July before mowing the sod, but mow it in May and again in June and July. Sods or cover crops are heavy users of soil moisture and may rob the trees to such an extent that fruit size is reduced in dry years.

For the same reason, avoid having a summer cover such as soybeans in the peach orchard. Grow the peach cover in the early fall, over winter and in the early spring when the trees' demands for moisture are not so heavy.

Cover Crops Not Adapted to Maryland

Birdsfoot Trefoil—Birdsfoot trefoil appears to be a cool climate plant. Seeded in four different orchards over a 3-year period, only one seeding survived 2 years. Both spring and fall seedings were tried using inoculated seed.

Cover Crops Adapted But Probably Not Desirable Because of Their Heavy Use of Soil Moisture

Weeping Love Grass, Reed Canary Grass, Smooth Brome Grass.

QUESTION BOX

Submitted by Growers

May growers burn brush at any other time than 4 p. m. to midnight, as stated in the state forestry law?

If done carefully, brush may be burned at any time, but must be kept 200 feet from woodland. Growers are not usually burning brush at the dangerous times of the year when forest fires are a problem.

Give a practical control for poison ivy and honeysuckle in orchards.

Best control for poison ivy is ammonium sulfamate sold under trade name "Ammate", using $\frac{3}{4}$ to 1 pound per gallon of water. Spray the ivy during June, preferably, wetting the foliage until it drips. This material does not seem to be effective on honeysuckle nor have some of the more caustic arsenic compound sprays given control. Recent research seems to show that 2, 4-D (2, 4-dichloro-phenoxy-acetic acid), one of the "hormone" materials, will control honeysuckle, if applied in the acid form, 1 part to 1,000 parts water, and sprayed on the foliage in late March and again in early June. Five gallons of this mixture should cover about 1,000 square feet. Write A. F. Vierheller, University of Maryland, College Park, Maryland, for address of commercial firms making this material.

THE RACE FOR CONSUMER FAVOR

TRUMAN NOLD, Executive Secretary,

National Apple Institute, Washington, D. C.

This season's experience again proves the stability of the people who make up the apple industry. Throughout the East and Midwest, the crop failure in this year of unprecedented demand has not produced pessimism nor discouragement. I have just returned from the Northwest and can report that their tide of prosperity is not deceiving nor misleading them.

Everywhere the thinking is directed toward an appraisal of the effects of the war years on our industry, toward taking stock, having a good critical look at ourselves and the industry, and scanning the prospects for the future.

As we look around to see where we stand, we can see a good many

items that belong on the credit side of the ledger. It is notable that nearly all of these have to do with our ability to produce.

Our soil has not been depleted nor has it been "mined" by the urgency to increase production at the expense of good soil practices, as has been the case in many other crops.

Despite the shortage of experienced labor, our orchards have been maintained in reasonably good condition. We have pulled through on our old equipment and what little new machinery we could get. There have been few times in earlier periods when we could so readily afford the new equipment that we need and can reasonably expect to get in the next year or two.

Orchard acreage, in the years immediately preceding the war, had been declining steadily, and there had been an extensive culling out of unprofitable trees in our orchards.

Commercial apple production did not decline at the same rate. The better varieties, on suitable sites, under good management, have shown an improvement in production per acre.

In the sense that there were actual surpluses of apples in the past—surpluses meaning excessive quantities of apples of one kind or another that for good reason did not move readily, clogged up the marketing channels so that apples good and bad were in trouble—we now find ourselves safely past the period of chronic surpluses for awhile.

In a modest way, new plantings have gone in all during the war, and as nursery stock becomes more plentiful again, we are due to see considerable new acreage. So far, this trend also is a healthy one, mainly because the planting for the most part is being done by apple men who know what they are doing.

The Midwest and the East were beginning to fear that the codling moth would take them down to defeat. But this past season has demonstrated what DDT can do. It has given the moth-ridden districts a new lease on life, and they confidently predict a decided improvement in quality beginning with next season's crop.

We have come through the war without having become entangled in any direct subsidy payments from the government. Many farm crops and products have a severe adjustment to make with the removal of government subsidy payments, but we are fortunately free from such complications.

It has been easy to paint a bright picture of our status as to production.

But the other half of the story is different. We are in bad shape as to our customers. There is nothing wrong that we cannot correct, in time. But we should know first how far we have fallen behind in the market place, and why.

Of all the farm products that go to consumers in their natural state, apples probably have a harder fight ahead of them than any other.

It is bad enough that by reason of the short crop we are having to sell poor apples to people who would rather have good ones.

It is far worse that so much of our good fruit has been taking a beating at our own hands and in the hands of our distributors all down the line. The short crop is not altogether responsible for that. It is not a new story; we were far from perfection before the war. But we had been making substantial progress. Since the war began we have not held our own. The unavoidable abnormalities resulting from price controls, the shortage of labor, and now this season's short crop have all taken their toll.

It is not necessary to dwell on what happened to our trained personnel in our orchards, packing sheds, and storages. It has been worse at the other end of the line, especially in the retail stores where the turnover of personnel has been terrific. Trained help in the stores is just as important to us as trained help in the orchard, but the rate of turnover has been so great that we now have to think almost in terms of starting from scratch.

As matters stand now, half the apples in our market place nationally are in a condition that mocks the hard work and skillful effort that went into making them good apples as they hung ripe on the tree.

They sell this year at high prices because consumers are limited in their choice of what they can buy, and, therefore, prefer poor apples to none at all.

We have only a half crop of apples in the United States this year. We could not sell twice as many apples, even with today's high consumer buying power, at a price that would return growers a profit, if the appearance and condition of the fruit were the same as it is today.

This is the last season that consumer selection will be so limited.

We are on the threshold of the greatest advancement and the greatest competition for consumer favor that the food industry has ever seen.

On the basis of present plantings, citrus production will continue to increase, at a mighty rate. The citrus people are good merchandisers. When you buy oranges, you will be able to get good oranges.

Banana imports will be resumed on a large scale. There is a product that has some real problems of condition; but when you buy bananas, you will be able to get good bananas.

The canned food industry is getting set to improve even its excellent pre-war packs; when you buy canned fruit, you will be able to count on the quality of what you get.

The frozen food industry is fairly bursting at the seams to expand, and its primary appeal is quality.

And let us not neglect the fact that we are just as much in competition with candy bars as with oranges. They will be back fighting for counter space by the time another year rolls by.

None of this is any reason for pessimism. On the contrary, this new era in the food industry presents no problems that we are not capable of meeting and overcoming; and it brings with it opportunities which we can seize and capitalize upon.

The industry has already proved that it is a good and fair match for this kind of problem. It has been just ten years since a few apple producers in various parts of the country first bestirred themselves in an organized way on the premise that harvest time marked only the halfway point, and not the ending, of their responsibility for the crop.

Today it is generally accepted that growers and shippers have a continuing responsibility that carries all the way through, a responsibility that we can't turn loose until the customer is ours and he is satisfied.

We have capable and willing allies in the terminal distributing trade, but the essential leadership is ours.

We define it as our job to deliver apples of the right variety, in the right quantity, at the right time, in the right condition, to customers who are prepared to appraise them at their real value.

The very fact that we are doing exactly that, some of the time, justifies the direction of our energies to do it more and more of the time. The necessity we face is not one of completely changing our methods, or of hunting for miracles. What we have on our hands is a job of renovation and modernization.

Part of the job can be done only at home, in the orchard and packing shed, and nowhere else. Part of it can be done by our distributive connections and nowhere else. Part of it can be handled only by the combined efforts of growers associated together in organizations like Appalachian Apples and the similar state and regional associations in other parts of the country. Part of it calls for treatment as a national problem, and can be adequately dealt with only on a national scale.

The beginning has already been made; we are already on the way. The featured subjects on this program, and in particular the address of your president, are evidences at hand.

The point of importance is that these problems are the kind of problems that we can cope with; and that the industry has worked its way into position to do so.

An important official of the Department of Agriculture who knows us well, recently said: "The apple industry has many assets, but the greatest of these is its talent for teamwork. It has been tried and proved." With the full use of that teamwork our future as apple growers is bright indeed.

R E P O R T
OF THE
THIRTY-NINTH ANNUAL MEETING
Maryland Crop Improvement
Association

Baltimore, Maryland
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MAXIMUM UTILIZATION OF SILAGE BY DAIRY COWS

DR. GORDON M. CAIRNS,

Head of Dairy Department, University of Maryland.

Roughage furnishes 60 to 65 percent of the nutrients consumed by dairy cows. The three forms commonly fed are pasture, hay, and silage. Chemical composition of the silage produced varies with the stage of maturity at time of ensiling and the crops ensiled. In other words, crops harvested and ensiled at the proper stage of maturity will make better silage.

Dairy cows are well adapted to the utilization of large quantities of roughage because of their digestive system. This enables them to digest and utilize to the greatest advantage large quantities of coarse, bulky food.

The advantages of silage can be summed up as follows:

- (1) Lower loss of nutrients than in field-cured hay.
- (2) Hay crops can be harvested and stored at a time when hay making may be difficult.
- (3) Good silage serves as a supplement to hay of variable quality and provides succulence in the winter ration.
- (4) Summer silage is valuable in providing part of the roughage during periods of drouth and poor pastures.
- (5) Corn silage will yield more digestible nutrients per acre on the average than will your hay crop.

Likewise, certain limitations must be considered. They are:

- (1) Labor in harvesting and ensiling. This can be offset, in part, by modern machinery such as field choppers.
- (2) Spoilage may be great if the silage is improperly handled.
- (3) With grasses and legumes, wilting must be practiced if a preservative is not used.

Silage serves as hay insurance, especially where corn silage is grown. It also serves as a supplementary form of roughage, both as a summer feed when pastures are short and as part of the winter roughage ration. Grass silage should be considered where soil erosion is a problem and also when it will bring about more efficient labor distribution. First cutting alfalfa or red clover may make better silage than hay, especially during poor curing weather and when the stems are extremely coarse.

The usual recommendations are that three pounds of silage are equal in dry matter and feeding value to one pound of hay. Silage can be fed in the following ways:

1. Three pounds of silage to replace one pound of hay. Usually half of the roughage is in the form of hay.
2. Cows may be fed 5 to 7 lbs. of hay daily and the remainder of their roughage in the form of silage. This means that they would be receiving about one-fourth of the dry matter of the roughage in the form of hay.
3. Grass or corn silage, or a combination of the two, may be fed exclusively for a period without harmful results.
4. Heifers may be fed all the silage they will consume along with a few pounds of good hay daily.

HOW TO PUT UP WILTED GRASS SILAGE

J. B. SHEPHERD, Bureau of Dairy Industry, U. S. D. A.

Right now, many farmers are thinking about how they will put up their 1946 grass silage. During the past several years, tens of thousands of farmers have made silage from legumes and immature grass crops by using the wilting method as an alternative to the use of scarce or high priced preservatives. They have found the wilting method easy to use and the silage easy on their silos. Farmers who have followed closely the simple and practical requirements of this method¹ have obtained an excellent grade of silage—free from mold and about the most palatable and nutritious silage they have ever put up. On the other hand, failure of some farmers to follow closely these simple requirements has in some instances resulted in more or less moldy silage and a condemnation of the wilting method.

At the Agricultural Research Center at Beltsville, Maryland, the Bureau of Dairy Industry has made from 100 to 200 tons of grass silage by the wilting method nearly every year for the past 10 years. Most of it has been of excellent quality—free from mold, and equal in feeding value to unwilted silage put up with molasses or other preservatives, although a little lower in carotene content. In a few cases there has been a small

¹U.S.D.A. Leaflet 238, Making grass silage by the wilting method.

amount of mold in the silage in the upper part of the silo—less than one percent by weight of the total. This is less than is often found in corn silage.

Silage made by the wilting method—principally alfalfa—has consistently given good results when fed to milking cows at Beltsville. Milk production and live-weight gains have been equal to or better than when hays from the same cutting or from the same kind of crop were fed. Despite a considerable loss of carotene due to wilting the crop before ensiling, this silage as fed contained two to three times as much carotene as is usually found in hay as fed. When the alfalfa silage was fed along with a limited amount of corn silage and the usual grain ration, the butterfat which the cows produced was much higher in vitamin A and natural yellow color than the butterfat produced by the same cows on the usual winter ration of hay and grain; or hay, corn silage, and grain. It was more nearly like that produced by the same cows the previous summer on good pasture.

As a result of its experience, the Bureau of Dairy Industry now uses the wilting method of making grass silage at Beltsville and recommends the following procedure as one that will consistently give good results under practical farm conditions if it is followed closely.

1. *Silos should be air-tight and have smooth walls.* The first requirement for making good wilted silage, or any other kind of silage for that matter, is an air-tight silo. Air must be forced out of the silage and kept out, otherwise considerable moldy silage will result. If the silo walls are very rough, pockets of air along the walls will cause a thin layer of moldy silage to develop next to the wall for a considerable distance down in the silo. If for any reason the walls or doors of an upright silo leak air, moldy silage will form. If the silo is in need of repair, these repairs should be made well in advance of silo-filling time. The steel hoops on wooden stave silos should be tightened before silo filling starts. In using shallow trench silos, extra care should be taken to pack the silage solidly and tight against the walls.

2. *Wilt the crop slightly.* To make good silage, legumes and immature grasses should be wilted only slightly after they are cut. When they are put in the silo, the average moisture content should not be higher than 68 percent nor lower than 60 percent. Scattered loads can have as much as 70 percent moisture without producing undesirable fermentations and odors, or they can have as little as 55 percent moisture if such loads are not too close to the top of the silo. If the crop is so dry that it causes considerable dust when chopped and blown into the silo, it probably has less than 55 percent of moisture. If a trench silo is used, none of the crop should contain less than 60 percent moisture.

The time required to wilt the crop to the desired moisture level (60 to 68 percent) may be as little as one or two hours on good drying days,

unless the crop is very heavy or very immature. During prolonged dry spells, crops cut at the usual haying stage will be dry enough to ensile within a few minutes after cutting. On very humid days, a half day to a day may be required to wilt the crop sufficiently. During rainy spells, the mowed crop may be in the field two or three days before it is dry enough to be siloed.

With a little practice the farmer can learn to determine by observation when the crop is ready for siloing. When a crop has wilted slightly it will appear a little lighter in color and the leaves and stems will be limp but not dry or curled. Twisting will bring moisture to the surface of the stems but no free moisture will run off. Upon rubbing the chopped crop material between the hands, the bruised stems and leaves will feel cool and moist but not wet. At this point the forage should be siloed as rapidly as possible so that no portion of the crop will become excessively wilted.

The farmer can also determine quickly when the chopped material contains a suitable amount of moisture for making wilted silage by using a simple inexpensive moisture tester developed at Beltsville. This moisture tester is described and illustrated in U.S.D.A. Leaflet 238, Making Grass Silage by the Wilting Method.

If desired, the rain-wet portion of the crop can be siloed without wilting by filling the silo slowly at the rate of three to four feet a day, without tramping, so that some heat will be generated; or it can be siloed at a normal rate by running 10 to 20 percent of dry hay or 5 to 12 percent of ground dry grain or three to five percent molasses (by weight) through the cutter along with the wet crop.

To avoid wilting some of the crop too much, it is usually advisable to cut no more at one time than can be ensiled in half a day. To avoid too rapid wilting, use a windrowing attachment on the mower cutter bar or follow close behind the mower with a side delivery rake. If the crop is not too heavy, combine two mowed swaths into one windrow to speed up the loading and filling operations.

If some of the crop gets so dry that it is dusty when chopped and blown into the silo, fresh unwilted green forage should be run through the cutter along with the dry material. Both dry and fresh green forage can be hauled in on the same load if field conditions permit.

3. *Set the cutter for a ¼-inch cut for best results.* Chopping the crop fine causes it to pack quickly and more completely in the silo—thereby forcing out air which is the cause of mold. This is a requirement that *MUST* be followed in making silage by the wilting method. Under no circumstances should the cutter be set for a longer cut than one-third inch, and the shorter setting of one-fourth inch is preferable and will give still better results. Failure to use a fine cut will prevent close packing, considerable air will be trapped in the silage, and the silage

will most certainly contain considerable mold. Other advantages to be gained from fine chopping are: Less fermentation, a better type of fermentation, a more palatable silage, and an increase in the quantity of crop that can be put in the silo. During silo filling, the cutter knives should be changed just as soon as they fail to cut cleanly and begin to shred the material. The cutter bar against which the knives operate should be changed or turned before its edge becomes rounded enough to cause shredding rather than cutting.

4. *Distribute silage evenly and tramp thoroughly in top third of silo.* All of the material put in the top third of the silo should be wilted only slightly. Heavy moist material will pack closer and also press out more air. Proper distribution of the material and thorough tramping in the upper half or one-third of the silo not only helps force out the air but also permits putting in more of the crop—thereby producing greater natural pressure for forcing out the air in the lower part of the silo.

5. *Put four to six feet of heavy unwilted silage on top of the wilted silage.* This wet, unwilted top layer should also be chopped fine. It will complete the job of forcing the air out of the ensiled material and will keep the air out. The more the crop was wilted before it was ensiled or the longer the silage is to be stored before it is fed, the deeper this heavy top layer should be. Failure to put enough fresh unwilted silage on top, particularly if some of the wilted silage near the top is very dry, will result in extensive areas of small moldy spots down several feet in the wilted portion. *No preservative whatsoever* will be needed in this wet top layer since it warms up naturally, producing a desirable fermentation and a mild, palatable silage without preservatives.

6. *Level off top and keep well tramped near wall while the silage is settling.* When filling is completed, level off the top and leave the silage slightly higher near the wall than at the center. During the settling period, keep the silage well compacted over the top and packed tightly against the silo wall. This will result in a minimum amount of top spoilage and will pay well for the time spent. Failure to tramp and pack the top properly during this period will result in air getting into the silage, particularly near the wall, and may cause several times as much spoilage as would occur otherwise. It may also result in some moldy silage in the wilted portion.

Good wilted grass silage is a fine feed. It produces more and better feed per acre than hay, particularly from weedy first-cutting crops, at no higher labor and equipment requirements per ton of dry matter stored. If the crop is not too mature when cut, the silage will be high in carotene content. If this method is given a fair trial, by performing properly every operation needed to insure a good quality feed, the results will be more than satisfactory and well worth the effort.

FIVE YEARS' EXPERIENCE WITH SILAGE AS THE ONLY WINTER ROUGHAGE FOR DAIRY CATTLE

GRANVILLE HIBBERD, Manager of Brooklandwood Farms.

About nine or ten years ago we had the unfortunate experience of losing our barn by fire. Since it was completely destroyed, we had no place to put our hay crop except in the silo. Since that time we have been using alfalfa silage without any bad results.

The bottleneck in making alfalfa hay is to get the first crop out of the way before the second crop is ready for handling. Often we cannot handle the first crop at the proper time because of unfavorable weather.

Harvesting of first crop alfalfa for silage enables us to get going ten days ahead of hay making. Since silage can be made during less favorable weather than hay, the job is over before the second crop of alfalfa is ready. Weather is usually more favorable for curing the second and third crops of alfalfa, so these are made into hay.

Question: Do you feed your cows with no hay at all?

Answer: I save the good hay for the better cows.

Question: How about heifers?

Answer: All they get is grain and hay.

Question: Have you had a chance to compare production of cows fed on silage alone as compared to hay?

Answer: Cannot see much difference between the cows that get silage and those that get hay.

Question: Do the cows on silage have digestive troubles?

Answer: They haven't had any yet.

Question: Have you wilted any alfalfa for silage?

Answer: Trouble with gumming up the pipes while filling the silo this year caused us to put in alfalfa with practically no molasses added. It is coming out just fine.

Question: When it is raining or wet all day, how do you wilt it?

Answer: Put a little dry hay in with the wet material or fill very slowly so as to let the heat develop.

Question: Do you have much leaf loss?

Answer: No. The main trouble you have is picking up stones.

Comments by Samuel M. Dell, Jr.: Last year we used a John Deere 64 field harvester but ran into trouble unloading the chopped material. Equipment for unloading is necessary for effective use of a field harvester.

For unloading equipment we chained together 2 by 6 planks and put them on the bed of the truck. We pull about one-fourth of the load off at a time with a tractor.

Comments by W. Roger Roop: I used a John Deere 66 field harvester last year in harvesting silage, both for my neighbors and myself. In custom harvesting we furnish the tractors, wagons equipped with revolving aprons for unloading, and a blower. Last year we harvested about 2,500 tons of silage.

Question: Is your machine equipped with a blower to put it into the wagon?

Answer: We drive the wagon behind the blower, which is arranged so it will blow down in the wagon.

Question: How did your soybean and sorghum silage compare with alfalfa for cows?

Answer: They seemed to like them both.

Question: What was the cost of your equipment?

Answer: The purchase price of the harvester was \$525.00, the wagon approximately \$300.00, and the blower \$205.00.

Question: Are the wagons made only for unloading silage?

Answer: No. When we want to use them for other purposes, we wind the apron underneath; then it is like any other wagon.

FERTILIZER TREATMENT ON CORN IN 1945

STANLEY P. STABLER, Farm Superintendent, Plant Research Farm

Three years ago H. R. Smalley of the National Fertilizer Association appeared on this program and gave the results of recent experiments in fertilizer placement. He told us then that the best yields of corn had been obtained from split applications; some of the fertilizer plowed down and some applied in the row.

In 1944 the University ran a series of tests on fertilizer placement, the results of which I reported to you at last year's meeting. In this report I showed you that we had obtained very beneficial results from 7-7-7 or ammonium nitrate plowed under, but no increase from a row application with the planter, or from side dressing with ammonium nitrate. 1944 was, as you remember, a very dry season. Because of seasonal variations one year's results should not be considered conclusive; therefore, we continued the experiment a second year.

This year I am here to report on the results of the 1945 experiment. The year 1945 was, as you know, as much too wet as 1944 was too dry. The results in 1945 may, therefore, be expected to be very different from those obtained in 1944.

The 1945 experiments were conducted at two locations. One of these was on the University Plant Research Farm, on a sandy loam soil which was rather well drained and in a moderate state of fertility. The other was on an adjoining farm (the Conley farm), a silt loam soil in a rather high state of fertility, but which was inclined to be a little too wet this year.

At each location we had three different plow-under treatments: nothing; 700 pounds per acre of 7-7-7; and 150 pounds per acre of ammonium nitrate. At the Conley farm we had the two additional treatments of 250 pounds per acre of superphosphate plowed under, and 250 pounds of superphosphate harrowed in. The corn was planted across the plow-under blocks with the following row treatments:

1. No planter fertilizer; no side dressing.
2. 200 pounds of 3-12-6 with planter; no side dressing.
3. No planter fertilizer; 100 pounds of ammonium nitrate side dressing.
4. 200 pounds of 3-12-6 with planter; 100 pounds of ammonium nitrate side dressing.

At the University farm a 5th treatment of 200 pounds of 3-12-6 with the planter and 200 pounds ammonium nitrate side dressing was included.

From the early stages of development, the rows which received the 200 pounds of 3-12-6 applied with the corn planter showed a definite advantage. The corn on these rows started off much more quickly and reached a height of 15 to 18 inches by the time the unfertilized rows had reached a height of 6 to 10 inches. The corn in the unfertilized rows was less uniform and showed more stunted stalks, many of them apparently from bud worm damage which was almost completely lacking in the fertilized rows. Cultivation was much easier on the fertilized rows. The above condition prevailed regardless of the plow-under treatments. A silking count on July 31 showed that at this date 50 percent of the plants in the fertilized rows had silked, whereas only 7.5 percent of the plants in the unfertilized rows had silked at the same date. In other words, the rows having fertilizer applied with the corn planter started development more rapidly and also kept growing to the end of the season better than the unfertilized rows. The side dressing showed no marked difference at silking time, but apparently kept the plants green later in the season. Here again the plow-under treatment showed better outward effects.

The yields from the different treatments are shown in the following table:

	700 lbs. 7-7-7 Plowed Under	150 lbs. Am. Nit. Plowed Under	Nothing Plowed Under	250 lbs. Super- phos. Plowed Under	250 lbs. Super- phos. Har- rowed in
Conley Farm					
No planter fertilizer.					
No side dressing.....	69.4	60.7	62.4	57.1	45.8
200 lbs. 3-12-6 with planter.					
No side dressing.....	90.0	89.9	87.6	86.9	81.4
No planter fertilizer.					
100 lbs. Am. Nit. side dressing....	61.7	46.9	66.9	61.0	56.9
200 lbs. 3-12-6 with planter.					
100 lbs. Am. Nit. side dressing.....	90.5	90.1	92.8	96.6	86.2
University Plant Research Farm					
No planter fertilizer.					
No side dressing.....	62.1	69.4	48.1		
200 lbs. 3-12-6 with planter.					
No side dressing	86.1	78.7	62.5		
No planter fertilizer.					
100 lbs. Am. Nit. side dressing.....	69.7	56.7	66.7		
200 lbs. 3-12-6 with planter.					
100 lbs. Am. Nit. side dressing.....	82.2	88.1	77.8		
200 lbs. 3-12-6 with planter.					
200 lbs. Am. Nit. side dressing.....	79.9	85.9	79.5		

Yields are in bushels per acre of marketable corn at 15.5% moisture.

The plow-under treatment showed no consistent trend on the wetter soil. On the better drained soil, the 7-7-7 showed a slight advantage over the other treatments and the ammonium nitrate was slightly better than for the plots where nothing was plowed under. The differences were not great and would not have been enough to pay for the cost of the fertilizer. We expect, however, that the fertilizer plowed under for the corn will benefit the following wheat crop.

The row treatments give a rather different story. On the wetter soil the plots which had 200 pounds of 3-12-6 applied with the planter gave about a 20 to 30 bushel increase in yield. A rather handsome return for a cost of \$2.50 for fertilizer. On the better drained soil, the response was not quite so great (15 to 20 bushels per acre increase), still a very satisfactory return for the investment. This pronounced response to the row application is probably due to the fact that the roots did not penetrate deeply into the wet soil and were, therefore, affected by the presence or absence of nutrients in the upper layer. The reverse, of course, was true in 1944 when the roots penetrated deeply into the dry soil and the yield was affected by the nutrients in the lower layers.

The side dressing with ammonium nitrate in the wet 1945 season showed some benefit, though not as much as might have been expected.

On the Conley farm, yields were increased 4 to 6 bushels by the nitrate application. On the University farm, the increase was 5 to 8 bushels. At both locations the response was somewhat spotty. There was evidence that some of the plots were thrown out of balance by too much nitrate where no fertilizer except nitrate was used. Application of 200 pounds of ammonium nitrate as a side dressing was no more effective than 100 pounds.

Last year Mr. Magruder conducted some cooperative fertilizer tests with farmers in different parts of the state. His summary shows that he got slight gains from the application of 200 pounds of 3-12-6 with the planter, but no significant increase from plowing under 500 pounds of either 0-14-7 or 6-8-6.

Results from other stations, particularly in the South, indicate that they are getting more response from nitrogen applications than we are.

To summarize the facts now at hand:

In the dry year of 1944 a plow-under application paid well; the row application, with the planter as a side dressing was of little help.

In the wet year of 1945, the row application with the planter was very beneficial, side dressing was of some help, but the plow-under gave little increase in yield. Other experiments show varying results indicating, in general, beneficial effects from liberal fertilization.

For the Maryland farmer who wishes to make a maximum crop, follow Mr. Smalley's recommendation of 1943; plow down some fertilizer and apply some with the planter. For the man who has good productive land and doesn't want to spend too much on fertilizer, a row application up to 250 pounds is a good practice.

For the man who grows corn on light land in a low state of fertility, plow down something for the roots to feed on, and don't go too heavy with the planter application.

The individual farmer will have to be the final judge as to which method best fits his program.

STATUS OF THE EUROPEAN CORN BORER IN MARYLAND

DR. ERNEST N. CORY
College Park, Md.

The threat of injury by the corn borer hangs over the head of the grower and canner continually.

In the past year the damage was not nearly so serious as in some previous years. The survey shows that nowhere in the state was the average number of borers sufficient to cause commercial loss. This is not to say that there was no damage. On the contrary, there were farms that suffered losses both in yield and in extra labor costs due to breaking of

stalks. This was noticeable in Montgomery County following a storm in September. The following figures show results of the Survey in the counties.

Counties	Ave. Stalks Infested	Ave. Borers
	in 25	Per Stalk
Anne Arundel	8.6	5.1
Baltimore	13.5	7.0
Carroll	9.5	7.5
Cecil	11.0	3.5
Charles	5.0	3.8
Frederick	7.5	3.9
Harford	12.3	4.7
Howard	15.3	4.8
Prince Georges	12.0	3.0
St. Marys	5.3	1.8
Washington	10.4	6.3
Somerset	21.2	.7
Wicomico	7.2	.2
Worcester	18.8	.7

It takes about 10 borers per stalk to cause serious loss. Some stalks ran as high as 49 borers in the outbreak in sweet corn three summers ago, and an early infestation may necessitate plowing down the first planting of sweet corn.

Since the borer developed into a real menace, two major research efforts have occupied the attention of the Department: Determination of the best date for planting a hybrid corn so that it will escape injury from the corn borer and the Japanese beetle. On the lower Eastern Shore this means planting about the last week in May or the first week in June. In Harford County mid-season planting seems best. The hybrids that are satisfactory so far seem to be US 13 and Funk's 135, although the latter breaks badly.

The other major effort is in the establishment of parasites in cooperation with the Bureau of Entomology and Plant Quarantine. For several years the Bureau released in selected areas small numbers of parasites, but it seems evident that since the corn crop generally is a low yielding cash crop any attempt to utilize insecticidal control would be uneconomical. Therefore, a serious attempt is being made to release and develop a biological complex of parasites consisting of three wasp-like insects, *Macrocentrus gifuensis*, *Chelonus annulipes*, and *Inareolata tapuntoria*, and one fly, *Lydella grisescens*. A total of approximately 80,000 parasites have been released in 16 separate areas in the last two years. The Department of Entomology has put about \$3,000 into labor and travel in producing these parasites at Moorestown, New Jersey, and releasing them at favorable locations in Maryland.

It will take several years to determine whether this complex can be

established. Where it has been accomplished in other states, the parasites have been responsible in limited localities for a reduction of as much as 65% of the borer damage. Once thoroughly established, it is the hope that the general level of borer damage will be kept to such low levels that cultural efforts and proper planting will so reduce the borer effectiveness that no major damage will occur.

Meanwhile farmers should follow the cultural practices that have been shown to be effective, namely: planting at the proper date, prompt destruction of sweet corn remnants, low cutting of field corn, ensiling or shredding of fodder, and clean plowing at the time most suitable to the particular farm conditions but at least before the spring pupation which means plowing by April first in most parts of the state.

Question: Has airplane dusting been tried for corn borer?

Answer: Yes, there has been a good deal of dusting. It is successful in controlling the corn borer with DDT to the extent of 70 percent. It is a costly thing and we have serious doubts as to using this method except for high priced market corn.

Question: If you disk your fodder down would it have any effect on the corn borer?

Answer: No. You have to plow before it would help any.

Question: How far will the corn borer travel from one field to another?

Answer: On light wind, it will travel about one-half mile.

Question: What method of extermination is the best to use?

Answer: We don't expect to exterminate the pest but to get you fellows to grow the best hybrid and plant at the best date, so that you can have better crops while we are trying to find a parasite to hold the corn borer under control.

Question: Do you find the corn borer in any other plants?

Answer: Yes. In flowers such as dahlias.

PRESENT STATUS OF BORER RESISTANCE IN CORN HYBRIDS

DR. R. G. ROTHGEB, Associate Professor

Annual performance records obtained by the Maryland Experiment Station during the last ten years testify to the superiority of corn hybrids. During this period 45 replicated comparative yield tests have been conducted over a wide area in the state. In not one single instance has the leading yield been made by an old-time variety. On the average, adapted hybrids have out-yielded the old varieties by 15 to 25 percent and have shown far less lodging. Although, for such a small state, Maryland varies widely in climate and soil, good hybrids are now available for all localities.

Some of the hybrids now being used were accepted because of per-

formance records made from 1939 to 1942. During this period there was comparatively little stalk breakage. During the last two years, however, stalk breakage has become worse. Hybrids, as well as varieties, have shown more "down plants" because of this trouble. The figures in Table 1 for total lodging and breakage below the ear illustrate the point.

TABLE 1.
Comparative Lodging

	1939-42	1944-1945	
	Total	Total	Breakage
Golden Queen o.p.....	32%	36%	6%
Iowa 939	13%	27%	17%
Illinois 448	8%	24%	19%
U. S. 13.....	6%	14%	10%

Due to the combination of conditions prevailing in 1945, the number of down or leaning stalks was excessive in the majority of fields. In the first place, the season was favorable for good yields. Stalks had a heavy load of ears to support. Second, a violent tropical storm occurred about the middle of September. Plants previously weakened by corn borers, stalk rots, and root worms, together with plants having inherently weak stalks and roots, were not able to stand up. No hybrid or variety was strong enough to escape all damage.

Because of the rather conspicuous nature of corn borer injury, some farmers have been inclined to attribute too much of the 1945 stalk breakage to this pest. It cannot be denied, however, that in some fields most of the below-the-ear breakage was associated with borer tunnels in the stalks. In some fields borer breaks represented from 10 to 20 percent of the total stand of plants. The data in Table 2 for an early, medium and late hybrid compared at two locations in 1945 show relations that may exist between breakage and borer infestation.

TABLE 2.
Corn Borer Breakage

	All Breakage	Borer Breaks	Av. No. Borers Per Stalk
College Park (Recorded Oct. 22)			
Iowa 939	20%	8%	1.0
U. S. 13.....	11%	10%	1.2
Illinois 448	24%	16%	1.2
Ridgely (Recorded Sept. 25)			
Iowa 939	21%	13%	3.8
U. S. 13	13%	7%	3.4
Illinois 448	36%	11%	3.4

Although stalk borers have been with us for sometime, it is only within the last few years that many Maryland farmers have become

concerned. Even now, according to annual surveys made by our entomologists, the borer population is relatively small. Nevertheless, the damage observed in 1945, while out of proportion to the borer population, has aroused much interest in control measures. Since the use of hybrids with good stalk quality is one such measure that has found practical use in other borer territory, it seems worthwhile to comment on its use in Maryland.

First, let it be said that no corn hybrid is immune to borer injury. However, in the north central states where most of the research on relative resistance of strains has been conducted, it has been found that hybrids do differ in their capacity to escape or sustain corn borer damage. Field tests in Maryland have shown that some hybrids have had significantly less stalk breakage than others. Fortunately, some that have been giving good all-around performance also seem to have stalks that can stand up against borer injury.

On the basis of a 7-year record U. S. 13 has given a good account of itself for both yield and standing ability. It has been a very popular hybrid throughout the southern part of the cornbelt. This open pedigree hybrid together with its close relatives (some with open pedigrees and some with closed pedigrees under private control) occupies a large part of the Maryland acreage. Although U. S. 13 did show considerable stalk breakage in 1945, its comparative record was among the best for commercial hybrids. (Comparative records for all hybrids tested in 1945 are reported in Md. Agr. Exp. Sta. Misc. Pub. No. 43).

Several hybrids as yet not widely grown in Maryland had less stalk breakage in 1945 than did U. S. 13. In Table 3 these hybrids are compared with the latter for lodging and yield. The figures are relative to U. S. 13 averages placed at 100.

TABLE 3.
Lodging and Yield Relative to U. S. 13

	Lodging	Yield
Ohio C38	64	95
Ohio C88	64	95
Iowa 4059	91	101
Ohio W10	95	96
U. S. 13.....	100	100

It will be noted that although Ohio C38 and C88 were definitely superior for stalk quality, they were not as productive as U. S. 13. With the corn borer population at its present level it is doubtful whether either could be substituted profitably for the older and later hybrid. On the other hand, if the borer damage should increase one of these numbers might find a place. In Ohio the popularity of C38 is increasing in corn borer territory.

Iowa 4059 and Ohio W10 have not been tested long enough for recommendation in this state. It is probable, however, that both eventually will replace Iowa 939, an older hybrid of similar maturity, but with poorer stalk quality.

In conclusion, it may be said that if the borer population continues to increase some relief can be had by the use of existing hybrids with better stalks. Also extensive and intensive research is in progress by the U. S. Department of Agriculture and various state experiment stations for the purpose of finding more resistant strains. This work has already helped to evaluate breeding stocks and thus has pointed the way for further improvement. Better hybrids are just around the corner.

REPORT OF BUSINESS MEETING

The business meeting was called to order by the president, J. Charles Rutledge. The nominating committee recommended William Brendel, Jr., Ellicott City, for President; T. A. Mann, Randallstown, for Vice-President; John W. Magruder, College Park, for Secretary-Treasurer, and Cecil K. Holter, Jefferson, Maryland Farm Bureau representative. A motion was made and passed to accept the nominations.

The auditing committee, composed of Conrad Liden, H. M. Carroll and Vernon A. Mathias, reported that they had audited the books and found them correct. A motion was made and passed to accept the report of the auditing committee.

The meeting adjourned.

R E P O R T
OF THE
THIRTY-SEVENTH ANNUAL MEETING
OF THE
**Maryland State Beekeepers
Association**

The Thirty-Seventh Annual Meeting of the Maryland State Beekeepers Association was held at the Lord Baltimore Hotel, Baltimore, on January 10, 1946.

President Harold L. Kelly, Silver Spring, announced that it was necessary to place two of the evening speakers on the afternoon program and carry some of the business session over to the evening session.

James I. Hambleton, Chief of the Beeculture Laboratory, U.S.D.A., gave a highly informative talk, pointing out the present and future value of the beekeeping industry in American agriculture. He stressed the indispensability of honey bees in the pollination of seed and fruit plants. The decline of legume seed yields in recent years, he said, was undoubtedly due to the killing of wild bees by sprays, dusts and clean cultivation, and the fact that agricultural leaders in their efforts to check it have entirely overlooked the insect cross pollination angle and the role that honey bees can play in relieving the situation. He said, in effect, that the Government of the State of Maryland could well afford to buy outright the entire annual honey crop produced in the state at a good retail price as a subsidy measure, dump the whole lot in the Potomac River, and still be away ahead because of the tremendous value derived from honey bees in setting seeds and fruits.

In the absence of Dr. L. P. Ditman, University of Maryland scientist, due to illness, Mr. Hambleton was called upon to discuss DDT in relation to bee culture. He said that the picture is not nearly as black as it was once thought to be, and that while DDT will kill honey bees, there has not yet been one authentic cause of mortality of a honey bee colony subjected to spraying or dusting under commercial conditions in the field. He pointed out that much work has been done, particularly in Texas, in dusting cotton by airplane, but that no colonies were killed or seriously weakened, and that very few individual bees were killed.

At the evening session, Robert Easter, Baltimore farmer-beekeeper-businessman, was elected Delegate to the Farm Bureau to fill the position

left vacant by the death of Dr. J. R. Abercrombie, long-time and venerable Baltimore physician.

The Association voted to continue membership in the National Federation of Beekeepers Associations.

Herbert Smith, Takoma Park, gave a most interesting summary of the whole honey market situation since the beginning of the war. In addition, he told of his experiences as a bottler in obtaining honey and related his contact with South American honey sources. He suggested that honey from the Argentine might well be imported by Maryland beekeepers to augment their local crops, inasmuch as it was light and of such mild flavor as to render it especially adaptable for blending.

Edward Driscoll, of the Maryland OPA, was called on and explained the new set-up for obtaining sugar for feeding bees in danger of starvation. He called attention to the fact that all local county sugar boards have been discontinued and that only the Central Board in Baltimore was now in existence. After passing around copies of the new sugar application forms, he explained just how they are to be filled out.

The remainder of the meeting was devoted to discussion of resolutions not receiving attention at the morning session.

Mr. Kelly appointed a committee to contact Dr. H. C. Byrd and urge his cooperation in designating an apiary site on the campus of the University of Maryland, and in starting erection of a suitable apicultural research laboratory and honey house. The following were asked to serve on that committee: L. B. Shearman, Glenarm; Dr. Litz, Baltimore, John Lindner, Cumberland; P. M. Klanuka, Cumberland, Richard Green, Barton.

GEORGE ABRAMS, Secretary.

R E P O R T
OF THE
Maryland Vegetable Growers'
Association

TWENTY-SEVENTH ANNUAL MEETING

Wednesday, January 9, 1946

Baltimore, Maryland

The twenty-seventh annual session was called to order by President James E. Andrews.

The secretary, Dr. E. P. Walls, reported that W. R. Ballard had retired, due to illness, on April 1, 1945.

The president appointed committees as follows: Nominating committee; Russell Adkins, Alfred Froesch and A. H. Spies; Resolutions committee; Ridgely Todd, Clay P. Whiteford and A. Lee Towson; Auditing committee, Calvin Skinner and J. S. Horton.

AIMS AND OBJECTIVES OF THE FOOD PRODUCERS COUNCIL, INC.

C. E. WISE, JR., Secretary-Treasurer

I am glad to have the opportunity to tell you something about the Food Producers Council, its aims and objectives.

The Food Producers Council, first of all, is an organization of organizations. These groups are all farmer-owned and farmer-controlled and represent Associations, Organizations and Cooperatives. It was started as a result of a Union action in and around the Philadelphia market. The notice the Unions issued early in May aroused the farmers using that market. Several meetings were called and the Northeast Vegetable and Potato Council appointed a committee to do something definite that would correct the situation.

The Unions were forcing farm truck drivers to join their Union. While farmers do not oppose the Unions as such and agree that labor has as much right to organize as farmers, they do oppose racketeering as evidenced by this move.

The Food Producers Council started with 20 members in June, 1945, and now numbers 68 member organizations in 8 states. In addition to the members, 147 individuals have contributed funds to carry out the work and purposes for which this Council was formed.

The purposes are best shown by the two following paragraphs from the Certificate of Incorporation:

1. To promote economy and efficiency in the marketing of food products through the removal of barriers to the free flow of food from producer to consumer, the betterment of market facilities and the improvement of other practices in the production and distribution of food products to the end that consumers may get food in the most nutritious and palatable form and farmers thereby may have better markets for their products.
2. To protect the individual right of its members and of farmers to conduct their own business in their own way.

These are the overall objectives of the organization.

The organization has taken on two definite programs of work. First of these is the return to the six-day market week in New York, Philadelphia and other eastern markets. These markets have been closed on Saturdays during 1945, thereby, causing inconvenience and loss to producers through spoilage. President Turner, of the Food Producers Council, met with the Congressional Committee in New York investigating this situation. As a result of this and other meetings, the Secretary of Agriculture studied the effects of the five-day market week for fruit and vegetables and requested a return to the six days and I quote as follows:

"The maturing of fruits and vegetables is a continuous process that cannot be stopped for two consecutive days each week," he stated. "Farmers do not have storage facilities suitable for holding highly perishable commodities from Friday to Monday and tying up refrigerator cars with shipped-in produce simply means losses in distant producing areas because of delays in obtaining cars. There have already been serious losses of perishable goods this year (1945) because of the shortage of refrigerator cars."

"... The volume of sales of some wholesalers is so low on Saturdays as to make their operations unprofitable," Anderson pointed out, "but no contracts between dealers and labor organizations should prevent markets from remaining open to handle highly perishable food supplies which farmers want to sell and consumers want to buy. I am therefore urging that wholesale trade and labor organizations do not permit existing contracts or other arrangements to stand in the way of marketings that must be made to avoid food losses. Full cooperation of farmers, wholesalers, labor and other groups will be necessary if sufficient food supplies are to be kept flowing to those in need."

Later it was found there was a controversy between the Unions and the Commission men as to who was responsible for the start of the five-day week. A meeting was arranged with the head of the Teamsters Union in New York to discuss this subject and secure the opening of the markets on Saturday. The committee brought with it a report based on the Coun-

cil's extensive research in the wholesale area, and among retailers and farmers.

Mr. Joseph Papa, head of Local 202, International Brotherhood of Teamsters, stated that discussion of the contract for the coming year was under way between the Union and the wholesale produce dealers of New York City. Saying that "as far as I am concerned, the market can stay open seven days a week, as long as the men work union hours," Papa declared he was hoping to obtain insertion into this year's contract of this clause:

"Section 12. When it is deemed advisable for the interests of the Union, that a change in the starting and finishing time of work, the number of days in the week the market shall operate and the number of hours of work of employees in each day be effective, the Union shall confer with a committee of the fruit and produce trade in order to effect such change and both parties at such conference shall agree upon an advance notice to allow the employers to adjust themselves to the changes. In no case shall the advance notice go beyond ten (10) days from the date of the notice of the conference. Any article or section in the agreement that may run contrary to this section, notwithstanding."

Inclusion of the clause in the new contract, in Papa's opinion, will open the way for adjustment of the market week.

While the question has not been settled conclusively, Mr. Turner and others in the organization are continuing to work for a renewal of the six-day week on these markets.

The forcing of farm truck drivers to join the Unions is a bigger proposition even than the six-day market and will take national legislation to correct. One piece of legislation that corrects a part of this is the Hobbs Anti-Racketeering Bill, which was passed by the House of Representatives and should be voted on by the Senate shortly. During the Congressional recess of the past few weeks, President Truman blasted Congress for lack of action on urgent bills to clarify the labor situation. The Hobbs Bill is one of the needed bills.

As described in the New York World-Telegram of December 8, the Hobbs Bill "is not, as some union lobbyists would have you believe, an anti-labor measure. It is a measure to protect honest labor and the public."

The Hobbs Bill is intended to be an amendment to the Federal Anti-Racketeering Bill. In 1942, when union teamsters were forcing out-of-state drivers to hire union drivers who were unneeded and pay them a day's wages, the Supreme Court of the United States ruled that the existing Anti-Racketeering Bill does not apply to unions. However, the ruling stated that union racketeering was not, therefore, beyond the reach of federal legislative control. In other words, it would be perfectly legal to pass a law amending the Anti-Racketeering Act to make it apply to unions. The Hobbs Bill is designed to do just that.

In 1943 the House passed the Hobbs Bill, 270-107, but it never reached the floor of the Senate. It was given to the Senate Judiciary Committee for study and never reported out for action. Now, the House again has passed the Hobbs Bill by voice vote. The bill again is under consideration by the Senate Judiciary Committee. This time it should be reported out for a vote and passed.

Agriculture depends upon a free market, readily available to the farmer for his fresh produce. The public roads must be kept open for the farmer to transport his goods quickly and efficiently. The Hobbs Bill is designed to accomplish this.

Again, I want to repeat that we do not oppose Labor Unions and their right to organize, but we do oppose their right to prevent farmers from marketing their produce either by the closing of markets or by the refusal to handle goods delivered by farm-owned, non-union trucks.

Additional legislation will be needed to correct boycotts and the refusal to handle produce delivered by non-union driven trucks, but a good start has been made to correct the situation that developed in Philadelphia.

The Food Producers Council's President is Mr. P. C. Turner and its Secretary-Treasurer is Mr. C. E. Wise, Jr., with its office located at 2 East North Avenue, Baltimore, Maryland.

A full-time man has been employed to investigate the New York and Philadelphia markets. Reports of this investigation are sent to all members through our newsletter, which is being published monthly.

We would appreciate any information you can give us on instances where truck drivers of farmer-owned trucks have been forced to join the Unions. We will keep the producers in Maryland informed on all progress made and thank you for the cooperation you are giving us in carrying out the objectives of free markets for farm producers.

LABOR OUTLOOK FOR 1946

PAUL E. NYSTROM, Deputy Director in charge of Farm Labor,
University of Maryland

One of the principal obstacles to a continued high farm production in 1946 is the shortage of farm labor. The situation is likely to be more critical than any previous time.

A. *Principal Factors in the Situation.*

1. Former farm workers in war plants are not returning to farms. Many have acquired new skills and when displaced as war plants shut down, they are drawing unemployment compensation benefits while seeking new jobs at the same skills before being willing to accept jobs at lower skills and lower wages.
2. Unemployment in industrial areas which had been predicted following VJ Day and which was expected to help relieve the shortage

of farm labor has not materialized. Compared with estimates of 8 to 10 million by the year's end, according to official estimates in November 1945 there were less than 2 million unemployed.

3. War veterans who had been expected to relieve the shortage of farm labor are not returning to farm jobs.
4. Since VJ Day there has been an exodus of farm labor from farms due to relaxation of manpower controls. This has resulted in a net loss of farm labor, especially year-round labor.
5. All prisoners of war will be returned to their homeland prior to April 1, 1946. Six thousand prisoners of war had been employed on Maryland farms and in canning factories in 1945. Their loss will make a tremendous hole in the labor supply. Curtailed supplies of canning factory workers may result in competition of canners and farmers for the available supply of labor, perhaps at higher wages.
6. Fewer Bahaman and Jamaican workers will be returned to Maryland, due to curtailed appropriations to finance their importation.¹
7. With the ending of the war, the patriotic incentive no longer exists for townspeople to volunteer for farm work. Large numbers of such workers who had been available in previous years will be removed from the farm labor force.
8. The direction and control of the migrant movement along the Eastern Seaboard that was possible during the war years will diminish and the migrant movement may become more chaotic and uncertain in 1946. During gasoline rationing, the issuance of identification certificates by County Agents which were exchanged by migrant crews for gasoline coupons made possible some direction and stabilization of the migrant movement which will no longer be possible.
9. The supply of farm machinery in 1946 will be inadequate to meet demands of farmers desiring to mechanize as a means of helping to meet the labor shortage.
10. The situation is deceptive in the winter months which is normally the slack season. The full impact of the situation will not be felt until the farming season opens up in the spring.

B. Recommendations

1. Farmers should plant crops not only in terms of the anticipated price and market prospects but also of the prospective labor supply.
2. A vigorous educational program must be conducted prior to the spring season to impress farmers with the facts of the situation.
3. Farmers must rely less upon governmental recruitment efforts which are likely to be inadequate and more upon their own individual recruitment efforts.

¹Appropriation of \$25,000,000 equals 80% of 1945 expenditures.

4. A maximum amount of exchange of labor and equipment will be necessary in 1946.
5. Labor-saving techniques and devices of all kinds and timeliness of farm operations to make most effective use of available labor will be imperative.
6. The small amount of imported labor that will be available must be utilized as "flying squadrons" in peak operations and must be severely rationed among producers who first exhaust all other sources of labor.
7. For the "long pull" the farm job must be made more attractive so farmers can more adequately compete with industry for labor. This will involve improvement in housing and working conditions and an increase in the productivity of labor by mechanization, greater efficiency and in some cases expansion of the size of farming unit.

SOME OBSERVATIONS ON THE FERTILIZATION OF VEGETABLE CROPS

DR. LELAND E. SCOTT, Associate Professor of Horticulture,
University of Maryland

I trust that you are not expecting to be told the exact amount and kind of fertilizer that should be used on the various vegetable crops for highest yield of high-quality products. For several reasons, I am intentionally going to omit such advice. In the first place, who am I to be dictating such a procedure to growers who, from long experience with their particular crops and soils, are much more familiar with their requirements. Secondly, supposing that the answers were known to the fertilization problems of your crops, they are so numerous that it would be far beyond the scope and time of this meeting to give them.

I would like to talk with you about a fertilizer which, if applied in amounts of a few pounds per acre, often gives astoundingly beneficial results, but which in increased amounts would kill all of the plants. This fertilizer element is boron. The common form of boron is the salt, borax, familiar to you all as a cleansing agent. Another familiar form is the acid, boric or boracic acid, used commonly as a mild disinfectant such as an eye wash. Either of these forms can be used to supply the plants' need for boron, but the salt, borax, is the usual commercial form.

Although required in exceedingly small quantities, it is probably true that all plants must have some boron for proper growth. It is also true that all of our soils contain some boron, just as our soils contain a certain quantity of all of the other fertilizing elements needed. Furthermore, with boron, just as with other elements, such as phosphorus and potash, the soil contains the element in two distinct forms, insofar as the plant is concerned—that which is in an available or soluble state, and that which is in an unavailable or insoluble state. Different kinds of soil vary greatly in

both the total amount present, and the percentage of the total that is available to plants. Similarly, although all plants require boron, different plants require quite different amounts.

Therefore, the problem of the grower in supplying the boron needs of his crop is concerned with a knowledge of both the available boron in his soil and the boron requirement of the particular crop he is growing. At first thought, the practical solution seems simple—borax is relatively cheap and little is required—why not add a few pounds to all of the fertilizer? Unfortunately, such indiscriminate use of borax is somewhat like the indiscriminate use of certain medical prescriptions—the right amount makes one well—too much knocks one out.

Experimental work on the boron requirement of vegetable crops is relatively new and few of the answers are known. We do have some idea about which vegetables are most apt to show boron deficiency symptoms in the field and which, therefore, would show a favorable response to boron application on soils with a low boron level. The root crops—beets, carrots, turnips and radishes are heavy boron feeders. Cabbage, spinach, cauliflower and tomatoes are also in this list. On the other hand, snap beans, lima beans, peas, soybeans and sweet potatoes apparently require quite small amounts of boron and are very easily injured by an overdose applied in the fertilizer. You can readily see that a borax application sufficient for good beets might result in total killing of a stand of lima beans.

What about the boron content of our Maryland soils? Here, again, we do not have much actual information. Sandy soils are most apt to be boron deficient and most of our vegetables are grown on sandy soils. Sassafras and Norfolk sands are especially apt to be deficient in boron. Recent analyses of soil from our experimental sweet potato plots at the University have shown an available boron level well below that which is considered adequate. In New Jersey, 88 of 200 soil samples from farms scattered over the state were found to be in a boron-deficient level.

The inadequacy of our knowledge of the boron needs for our vegetable crops is well illustrated in recent work with sweet potatoes. A few years ago it was reported from North Carolina that borax stopped cracking of the sweet potato. This cracking is of the same type that often causes so much damage in our Maryland sweet potato fields. Naturally, we were much interested and laid out plots in fields near Salisbury in 1944. We failed completely to find any relation between borax fertilization and cracking. Does this mean that our sweet potato fields do not require borax? Not necessarily. It may mean that we need to do much more work on the problem, considering the relation of boron nutrition to other fertilizer elements and practices. There is a report from South Carolina giving experimental results of remarkable increases in yield of sweet potatoes from the use of small amounts of borax. It seems that the use of borax in certain instances greatly increases yields, even though there has been no apparent boron-deficiency symptoms. Used *judiciously* and *carefully*, borax may have an important role in increasing yield and quality of our Maryland vegetable crops.

In considering other subject matter for these observations, I was interested in an article in the December Reader's Digest entitled, "Are We Starving to Death?" condensed from an article of the same alarming title in the Saturday Evening Post. I found this to be another article on the popular subject of vitamins and minerals, but presented from a somewhat different angle—from the standpoint of the effect of soils and fertilizers on the nutritional value of the plant. I cannot say that I am in fear of the Maryland grower starving or of the consumer starving while eating Maryland-grown vegetables. Nevertheless, in this vitamin conscious age and while the nutritive value of this or that food is shouted at us daily over the radio or placed before our eyes in gaudily colored and sensational magazine advertisements, it certainly behooves us as growers and salesmen of Maryland vegetables to have some facts concerning the effects of soils and fertilizers on the nutritive value of these products.

Just what are the facts? Let us consider first the question of the mineral content of a crop. As far as human needs are concerned, the minerals of interest are primarily calcium, phosphorus and iron. It has been shown by analysis that the percentages of these minerals in the plant can be increased by increasing the amount present in the soil through fertilization. However, it has been found that the increase is confined largely to the vegetative parts of the plant. Thus, for vegetables in which the seed or fruit is the part used for human consumption, such as peas, beans, corn and tomatoes, the mineral composition of the vegetable is remarkably uniform over a wide range of fertilization. With the leafy type vegetables such as spinach and kale, there is somewhat more opportunity to affect the mineral content of the marketable product.

The question of effect of soils and fertilizers on the vitamin content is a still more intriguing one, and one on which we have much less information. When considering the mineral content, the relationship of fertilizer to plant composition was direct. That is, fertilizing with phosphorus increases the phosphorus content of the plant. With the problem of vitamin content the relationship is obviously indirect, if present at all. The popular articles and advertisements give very definite examples. The one I mentioned states that a pinch of manganese tripled the vitamin C content of tomatoes; that boron doubled the vitamin A content of apples. Our laboriously conducted laboratory and field experiments have to date shown surprisingly little relationship. If we are forced by competition to advertise the vitamin content of our Maryland vegetables, we are fortunate in having the Maryland Golden variety of sweet potato. Here we have one of the highest vitamin A contents found in any vegetable crop. But its high vitamin content is due to a varietal characteristic and not to our fertilization program. The vitamin content of fruits and vegetables is dependent far more upon the kind or variety than it is upon how or where it is grown. The fact that the Selective Service found more rejectees from the southern states stems from a complicated economic problem rather than from the statement that they were starved from eating products of the demineralized soils of the south. Although we must keep up with the popular

"hullabaloo" and be prepared to use any factual statements in our advertising, it is well to be aware of the distinct limitations along these lines.

The auditing committee reported that the report of the treasurer was correct and accurate.

The report of the nominating committee was as follows:

President.....	A. Lee Towson
Vice-President.....	Edgar L. Williams
Secretary-Treasurer.....	Francis C. Stark, Jr.
Director (3-year term).....	S. H. Phillips
" (2-year term).....	Carl H. Smith
Director for Farm Bureau.....	F. Ridgely Todd
Delegate to Farm Bureau.....	S. H. Rayner
Delegate to Agricultural Council.....	Clay P. Whiteford

It was moved, and seconded, that the secretary cast the ballot. Motion passed. The secretary's ballot approved the nominations.

The resolutions committee recommended that:

1. All prospects show that "harvest labor" for 1946 vegetables will be reduced by approximately 50%, therefore,
Be it resolved, that the proper authorities of the University of Maryland *publicize* this fact through normal channels of contact with the producers, in order to avoid substantial losses to farmers by planting unharvestable production.
2. The American Farm Bureau Federation has recently established a director for the Fruit and Vegetable Commodity Group and be it resolved that we actively support this commodity division to the fullest extent.
3. We heartily endorse and support the work of the Food Producers Council.

The resolutions were unanimously adopted by the Association.

AFTERNOON SESSION

The afternoon meeting was a joint session with the Horticultural Council, at which Marshall Heaps presided.

Dr. W. B. Kemp, director of the Maryland Agricultural Experiment Station, reported on the research projects underway in the Department of Horticulture. He advised that with a loss of personnel to the armed forces and with the advent of new problems posed by the war, it was necessary to drop many of the projects on which definite progress was being made. Enhanced by the lack of technically trained personnel in the country, the resumption of many of these projects will be a slow process.

PROGRAM OF THE FRUIT AND VEGETABLE DEPARTMENT

PORTER R. TAYLOR, Director, Fruit and Vegetable Department
American Farm Bureau Federation

Fruit and vegetable growers have performed almost a miracle of production in the crops which they have grown during the war years. The latest reports of the Department of Agriculture indicate that 1945 commercial truck crops will be about 6 percent above the 1944 record and 28 percent above the 10-year average. In the case of the important vegetable crops for processing, production during the past year was 4 percent below 1944, but 31 percent above the average, with record crops of several commodities. Despite the fact that fruit could not increase so rapidly, the total fruit crop was the largest on record in 1944 and only 5 percent less than that amount in 1945, despite the fact that the 1945 apple crop was only half of average size. A record crop of each of the important commercial fruits, with the exception of apples, has been grown in at least one of the past two years. High yields of potatoes have resulted in a 1943 production which was the largest on record and a 1945 crop which was third in volume.

The total farm value of all such fruit and vegetable crops during 1943, 1944 and 1945 has approximated three billion dollars each year. Prices during the war period have been generally good, as the indices show that these commodities are among the groups which have received the highest relative prices. However, it should not be forgotten that prior to the war, these same commodities sold at relatively low prices as compared with other farm products, even though the total volume of fruits and vegetables during that period was less than during the war years.

The basic policy of the United States at this time appears to be to maintain "an economy of abundance" to provide food supplies ample to meet all possible requirements, both domestic and foreign. Obviously, such "an economy of abundance" can continue only as long as a proper balance is maintained between the production of agricultural and industrial products. At present, we have such an abundance of fruits and vegetables, with the largest production in history, but shortages of many of the important industrial products exist and, therefore, we do not have that necessary balance. Much of the future trend of fruit and vegetable prices will depend upon the speed with which reconversion is actually completed, full manufacture of industrial products attained and high consumer purchasing power assured.

As long as acreage and production remain at present high levels, it would appear that present prices can only be maintained by a very high consumer buying power such as has existed during the war period. Any appreciable reduction in consumer purchasing power would probably result in substantial decreases in prices if the current level of production

is continued. From all present signs, growers must expect costs of production in 1946 to be as high or higher than they have been in the past year or two. Therefore, producers are faced with a situation in which 1946 costs are almost certain to be high with substantially lower selling prices probable if the volume of production is maintained at existing levels. It would appear to be only common sense for growers to consider their production plans for 1946 most carefully in view of these conditions and to take any other steps which are possible to protect themselves against preventable losses.

While fruit and vegetable producers can do little to influence the buying power of the consumers of America, as individuals and through organized groups they can do considerable to meet the marketing problems which may develop, in part, as a result of this high level of production.

During the period subsequent to World War I, substantial progress was made in the improved grading and standardization of fruit and vegetables for fresh market. Unfortunately, OPA ceiling prices for fresh fruits and vegetables have been established without reference to the quality of the product so that when supplies were short, growers were compelled to lower the grades marketed because of these fixed ceilings. As a result, the grade of product offered to consumers has been below that which would have been marketed if the normal grade differentials had not been nullified by price ceilings. Thus, the real burden of price control has fallen on those growers or organizations which have taken the lead in marketing a high grade and on consumers who have desired to purchase produce of superior quality.

Growers must realize that as soon as price ceilings are removed, former competitive conditions are likely to be immediately restored and higher prices will be paid for superior quality. The National Fruit and Vegetable Committee has very wisely suggested that one of the first efforts of the new Fruit and Vegetable Department shall be to "promote an active program to restore, and if possible, improve the high pre-war standards of inspection, packaging, grading, storing, and shipping, of fresh fruits and vegetables." This is a task which growers and shippers should assume themselves at once or as soon as adequate labor is available to properly carry out a grading program. In commodities and producing areas where marketing agreements are feasible and practicable, such a program should be considered as a means of quality improvement.

Closely related to such a standardization program is the development of adequate facilities for processing or preparing by-products from the lower grades when volume is more than ample to supply the normal markets. By this method new outlets may be developed which may increase the total volume produced and marketed to the advantage of both producer and consumer. For example, within less than 20 years the outlet for processed grapefruit has been developed so that it now absorbs over two-thirds of a much larger production.

A difference of a few days or a week in the harvest of a particular commodity in different commercial producing areas may result in a substantial change in the market situation for that product and determine whether the grower receives a profit or a loss on his entire season's operation. Knowledge as to the exact time of crop harvests in producing areas is one of the types of information most needed to develop a more effective marketing program. If information of this character can be assembled and analyzed promptly by the national office, and then returned to the state and county offices promptly, it can be of great service to growers in their marketing operation.

An assurance to the fruit and vegetable grower that demand for his product can be enlarged to meet increased supplies at the height of the harvest and that distribution can be made more efficient is an absolute necessity if the grower is expected to maintain production for an "economy of abundance" without incurring the risk of serious financial losses during periods of heavy supply when "glut" prices have usually developed.

During the past several years, cooperative programs for the merchandising of plentiful supplies of fruits and vegetables and certain other commodities have been developed by the organized wholesalers and retailers when requested to do so by organized producers. Through such programs, it has been possible to improve the fundamental position of the producer by increasing consumer demand for his product simultaneously with the arrival of larger supplies at consuming markets. By expanding demand in this manner, on numerous occasions it has been possible to market larger volumes of particular crops without experiencing the ruinously low producer prices which might have prevailed if such organized action had not been taken in advance.

This type of cooperation has continued because retailers have learned that they can enlarge their own sales volume through such merchandising programs and, therefore, can increase their own profits, and at the same time render a substantial service to producers in the marketing of their products. It is anticipated that the development of such information regarding supplies and of merchandising programs will become one of the most effective and valuable services which the Fruit and Vegetable Department can provide for producers in marketing their crops.

Another type of necessary information is the Commodity News Letter now being mailed to the State Farm Bureaus from the Washington office each Saturday. Through this letter the state organizations can be kept up to date with regard to developments affecting any of the major commodities in the agricultural field.

During the period immediately following the war, it is expected that a number of terminal market projects will be developed and carried to completion. These plans must provide for special services such as cold storage, adequate facilities to minimize handling and other costs, and ample room to handle and display produce attractively. As the chief cost

of building and operating such terminal markets must eventually be borne by producers and consumers, every effort should be made to see that they are constructed and operated as economically as possible to reduce terminal charges to the minimum.

The development of new trade agreements with foreign countries is likely to be one of the most active fields of work during 1946. The agreements with the British Empire and other countries are expected to be under consideration early in the new year and all groups interested in presenting the facts with regard to their commodities should be prepared to do so by that time.

It should be borne in mind by all concerned that the trade agreement program contemplates different handling for different commodities in line with the situation existing in each case. In a general way, most of the fruit industry is interested in the development of exports, as such outlets are important for citrus, apples, pears, grapes and dried and canned fruits. Producers of most of the vegetable commodities and potatoes are also interested in exports to Canada at different times during the year. On the other hand, producers of winter vegetables and certain other specialized commodities such as nuts are primarily interested in a continuation of the protective tariffs which are now in effect.

Obviously, the Fruit and Vegetables Department will not be in position to represent producers of either group directly, as such action would inevitably make it necessary to take contradictory positions. The National Fruit and Vegetable Committee has, therefore, wisely suggested that the Department assist producer groups in preparing for such hearings but that each group should be expected to present its own case in connection with specific trade agreements.

Another field of activity which should be of much importance during the coming months will be that relating to processing vegetables. As indicated earlier, the 1945 production of this group of commodities is 31 percent above the 10-year average and record crops have been harvested for a number of important commodities such as peas and corn. As the large part of this production is grown under contracts entered into in advance by producers with processors, the market situation with regard to these commodities is much different than in the case of produce sold on the fresh market. Extreme care must be taken to maintain a proper balance between production and consumption so that both growers and canners will not be faced with an excessive carry-over from the 1946 crop which would have a price depressing effect upon the 1947 production. Some practical method for reducing the production of peas for processing from the very high level of 1945 should be given consideration in connection with plans for 1946, but it must be recognized that costs are almost certain to rise rather than to drop indicating that acreage should be reduced rather than grower prices.

As the producers of the raw materials, growers have a definite interest in the quantity, price and other provisions of the contract which they enter into with processors. Certain of the state organizations have made substantial progress in the development of bargaining relations with processors in this manner. It should also be mentioned that most of the canning crops are grown in states where Farm Bureau membership is strong, and where the development of such a producer organization should be relatively simple. Although the need for such organizations may not appear pressing at this time, it is likely to become very important when inventories are restored to normal levels.

The National Fruit and Vegetable Committee has already been chosen, with four members from each of the four regions of the country. One member from each region is a member of the Board of Directors of the AFBF. It is expected that these Board members will present the views of the National Fruit and Vegetable Committee which may require consideration by the Board of Directors of the AFBF. The other members are chosen to represent each of the four regions. The National Committee is expected to meet shortly before the quarterly Board meeting and thus prompt consideration of recommendations regarding fruits and vegetables should be given so that decisions on policy should not be unduly delayed.

In order to carry out the program outlined above, the National Fruit and Vegetable Committee has recommended to the State Farm Bureaus that a fruit and vegetable committee be set up in each state where these commodities are grown commercially. Such a committee should include representation of the various important fruit and vegetable products and regions, unless it is deemed advisable to divide into sub-committees for fruit, vegetables, potatoes, etc. The number of members making up such a committee should be relatively small but representative of all groups.

One of the most important functions of such a state committee will be to keep the state and national offices informed as to conditions prevailing in the industry with regard to prospective supplies, time of harvest, marketing problems, and other special situations which may occur from time to time. By the accumulation of such facts through the state office into the national office, it will be possible to assemble, analyze, and return much information of value and service to the state and county committees.

Many of the plentiful supplies of fruits and vegetables can be marketed in nearby consuming areas if plans are made in sufficient time for such action. It should be a function of such state committees to work with organized independent and chain food retailers to handle such plentiful supplies in markets within the state of production if possible before endeavoring to develop more distant markets.

One national commodity sub-committee, that for citrus fruits, has been designated and members from four states have been meeting from time

to time for several years. While the organization of this committee is simpler than will be possible for many of the other fruits or vegetables, the same principle should be followed for other commodities. However, such commodity sub-committees should be established *only* when such action is needed. The operations of each commodity sub-committee will be coordinated through the National Fruit and Vegetable Committee and matters of policy will be subject to action by the Board of Directors of the Farm Bureau Federation. However, as programs are developed, it is expected that in most instances policies which have already been established may be used.

The functions of the Fruit and Vegetables Department would appear to be; (1) to help organize a fruit and vegetable committee, or its equivalent, in each of the states where these commodities are important and are not now organized; (2) to act as a clearing house for information collected from or distributed to the state committees; (3) to assist in the development and operation of regional or national commodity sub-committees; (4) to develop special programs such as merchandising which relate to particular commodities; and (5) to carry out such special assignments, investigations, etc., as may be made by the National Committee.

From the standpoint of effective organization, the National Fruit and Vegetable Committee has already recommended that contacts between the Fruit and Vegetable Department and members should be carried on through the state Farm Bureau offices or persons designated by it. Such a step is obviously necessary because it is expected that eventually such work will be carried on with about 40 states and with about as many different commodities within the fruit and vegetable group. This provision is not intended to hamper contacts but rather to systematize them so that they can be carried on more effectively.

We must all realize that the success of this entire program depends upon the willingness, desire, and ability of producers to "help themselves" and upon the prompt development of effective organization in the states and counties to carry out such a plan. That portion of the program must be pushed to completion during the next few months if the organization is to be available for use during the 1946 season. Each of the state Farm Bureaus should select such a committee, if it does not already have one, at the earliest opportunity so that preparations for the coming year can be developed as rapidly as possible.

From this discussion it should be clear that there is a broad field for service by the new Fruit and Vegetable Department and its related groups in the various states. In fact, the chief danger in the initial stages is that activities may be spread over so many subjects that little definite progress will be made. But if its primary activities are concentrated on working out plans, developing organization, and assembling, analyzing and distributing information which can be carried out by local, state or commodity groups, the Department can multiply its own work

many times. And perhaps most important, if the Fruit and Vegetable Department can become the central point through which the producers of the many fruit and vegetable commodities can coordinate their activities with each other and with other related groups, it can become a very useful and much needed addition to the Farm Bureau organization and the fruit and vegetable industry as a whole.

REPORT
OF THE
Maryland Stockmen's Association
SEVENTEENTH ANNUAL MEETING

January 9, 1946
Baltimore, Maryland

On January 9th, Wednesday of Farm Bureau Week, the Maryland Stockmen's Association held its annual meeting at the Lord Baltimore Hotel. Their annual banquet was held at the Merchants Club in the evening.

President Jos. W. Shirley, Jr., started the meeting promptly and immediately proceeded with the program. W. Alan McGregor, who has had much to do with efforts to acquire more uniformity in inter-state regulations regarding the movement of bangs accredited and vaccinated beef cattle, was first on the program. He gave an interesting report, which clearly indicates that much progress has been made. However, there are still a few differences to be worked out which, no doubt, only time will correct.

Following Mr. McGregor's talk, Dr. A. L. Brueckner, Chief of the Livestock Sanitary Service, led a discussion on this topic. In answering many questions advanced by the members, a better understanding of existing regulations was attained. Best advice to anyone contemplating inter-state shipment of beef cattle for breeding purposes is to first contact the Livestock Sanitary Service, College Park, Maryland, and avoid any misunderstanding later. The same advice applies to individuals in other states, —their best bet being to contact their state veterinarian with regard to inter-state shipments prior to, rather than after shipment.

The second topic for discussion was DDT and its use with livestock. R. R. Fouracre of E. I. duPont de Nemours & Co., led off with a talk on the use of DDT, both on livestock and in spraying stables. The room was inadequate to hold the interested members and many questions were advanced. Dr. E. N. Cory, State Entomologist, led the discussion following Mr. Fouracre's talk and brought experiences with DDT down to results in Maryland. Much information and a lot of misinformation has been spread relative to DDT and its use. DDT has a lot of possibilities but the integrity of the manufacturer applies with this product, as with most articles. Used properly, there is much promise of this preparation being of great value to livestockmen.

Noon stops most farm operations, or suspends them at least until the farmer has satisfied the nutritional needs of the inner man. All were glad

to halt the program and enjoy the first post-war Hampshire brunch, sponsored by the Maryland Hampshire Swine Breeders' Association. That delicious and ample offering of Hampshire ham, bacon and eggs, with coffee and pie for trimmings, certainly registered with a bang.

Immediately after lunch a short business session was held. The following officers were elected for the ensuing year:

Vere S. Culver.....	President
Dan. E. Wight.....	Vice-President
Joseph M. Vial.....	Secretary-Treasurer
Directors.....Wells E. Hunt, H. L. Straus, A. G. Rolfe, G. Harry Cannaday	
Director of Farm Bureau.....	J. Herbert Snyder
Delegate to Farm Bureau.....	William J. Hines
Delegate to Maryland Agricultural Society.....	J. Kiefer Funk

A resolution expressing the sympathy of the membership to the Harvey family in the loss of W. R. Harvey, a beloved and highly esteemed friend of all livestock men who knew him, was unanimously adopted with instructions that same be prepared and incorporated on the permanent records of the Association and read at the evening banquet, as well as being presented to Mrs. Harvey and family.

Two other resolutions were presented and carried, one urging the re-establishment of the "rat" test for pregnancy in mares, and one relative to the removal of subsidies and price ceilings.

At the evening banquet, President Joseph W. Shirley, Jr., presented various guests and called upon Mylo S. Downey to present the Wilson Award to Maryland's 1945 outstanding livestock club boy—Robert Hanson of Montgomery County.

The main speaker of the evening was the Agricultural Attache of the British Embassy, Mr. A. N. Duckham, who spoke on "History, Nature and the Problem of the Meat Producer."

Mr. Duckham certainly had a novel approach to our livestock development and traced down through the ages the various purposes for which farm animals have been bred and reared, many of which are responsible for the difficulties constructive breeders now encounter in their quest for the ideal meat animal.

The banquet ended the program of the annual meeting.

THE USE OF DDT ON ANIMALS

R. R. FOURACRE, DuPont Company

DDT originated in Germany in 1874. However, its importance as an insecticide was not discovered until Mueller, a Swiss chemist employed by the J. R. Geigy Company, found that a 5% suspension of this material in water was extremely effective against the Colorado potato beetle in 1941. The following year, 150 tons of DDT were used in Switzerland for control

of this insect. The first DDT manufactured in this country was made in Cincinnati, Ohio, in May 1943. The Geigy Company holds Swiss, British, and United States patents for the manufacture and compounding of DDT.

In 1943 and 1944 very little DDT was made available for experimental work as most of the material was requisitioned by the Armed Forces. Such quantities as were available were used by State and Government experimental stations on a variety of crops and livestock. During the past season considerable DDT was available to growers for the first time. The experimental data accumulated to date, while voluminous and varied in scope, does not permit of many fixed conclusions. It will probably be several years before the merits and the faults of DDT are fairly well established.

DDT is a synthetic organic substance whose outstanding qualities are its residual toxicity and its action as a stomach poison, as well as a contact insecticide. The latter seems the most important, the substance apparently paralyzing the legs and other body parts—probably due to contact with nerve receptors in the legs.

Technically, DDT, before it is formulated into products such as are on exhibit here today, is a white, waxy solid, practically insoluble in water. Benzene, chloroform, and cyclohexanone are some of the better solvents, while kerosene, diesel oil and crude oil rank among the poorer solvents.

Few discoveries in recent times have received so much publicity as DDT. Undoubtedly this has led some people to expect too many miracles. This product is not a general insecticide, being very effective against horn flies but ineffective against deer flies and horse flies; very effective against the Colorado potato beetle, but ineffective against the Mexican bean beetle.

DDT formulations may be roughly divided into four main groups: solutions, emulsions, water dispersible powders (all used as liquid forms) and dust mixtures. Solutions are not to be used on livestock, as there is considerable evidence that the high quality of oil in solutions caused the DDT to penetrate into the flesh of the animal where it apparently is stored in the fatty tissue. The cumulative effect of succeeding applications could be dangerous. Additionally, there is evidence that material so stored in the fatty tissue is being found in the milk of dairy cattle and goats.

Emulsions, while they have appeared reasonably safe on livestock, should be used with caution, particularly on milking animals for the same reason as given in discussing solutions. However, the small quantity of oil contained in emulsions makes them much less of a hazard.

Water soluble DDT suspensions appear perfectly safe on all livestock (except cats) and on humans.

The dust mixtures appear perfectly safe on animals (again excluding cats which have the habit of licking their fur, thus ingesting quantities of DDT) and on humans. This form was used most extensively on soldiers and civilians in vermin infested areas. Applications of dust mixtures on livestock, while effective, lack the residual effect of sprays.

In Texas, a 2½% water dispersible powder sprayed on cattle for horn flies was effective for from two to three weeks. Concentrations as low as .1% have proved effective against this fly but the residual effect is rather short. In the same state a 10% DDT dust killed the motile stages of the short-nosed cattle louse, long-nosed blood sucking louse, and the cattle-biting louse. A .2% dip was more effective though more difficult to apply and in addition the active ingredient in the dip vats tends to settle out.

DDT has no ovicidal value and if egg stages are present it will be necessary to use a concentration strong enough to have a residual effect lasting beyond the period or apply a second dose when the eggs have hatched.

Most effective spraying of DDT on livestock has been done with pressures of 200 to 600 pounds, using various types of power sprayers. This seems necessary to get an effective application on the skin of most animals. It is advisable to get the animal completely covered. Spraying should preferably be done on bare ground eliminating the possibility of animals foraging on grasses carrying a heavy load of residue.

Barns and other outbuildings may be sprayed with any of the formulations available, using from 3% to 5% concentrations and at least 200 pounds of pressure. All animals should be excluded during the spraying and all feed, water, and drinking utensils covered. Whitewashed walls will give a shorter residual effect. Under normal conditions a well-sprayed building should give protection from flies for several months. The water dispersible DDT, while a good barn spray, should not be used for killing flies in the home, as the white residue will be objectionable. For the latter purpose a 5% DDT in miscible kerosene is recommended, and, if quick knockdown is desired, .1% of pyrethrum is added. 5% DDT in kerosene is also effective against bed bugs and cockroaches.

The present temporary tolerance on DDT residue is 7 parts per million. The most accurate test to date is the chlorine method and this may not be too valid. To date removal of residues has proved troublesome and no material has proved very effective.

Technically DDT will stand long storage in shipping containers but is slowly decomposed by sunlight and high temperature. Loss of toxicity is not a sure sign that the residue has been markedly reduced.

It is claimed that control of lice and horn flies on dairy animals has increased milk production from 8 to 20% and that beef cattle have shown increased gains of ½ to 1 pound per day. DDT appears to have a definite place in the livestock program when used according to recommendations. It is well to remember that we still lack many of the answers.

USES AND LIMITATIONS OF DDT FOR CATTLE

ERNEST N. CORY, College Park, Md.

At the outset, let me say that you should use every precaution in the application of DDT that is suggested or that common sense dictates.

Its effect on animals has not been fully investigated. Only the most careful use is justified on the basis of present knowledge.

Barn spraying seems to be fully justified. Approximately 75 farms have been sprayed experimentally and as yet we cannot state specifically the best formula of procedure, but it appears that one percent water dispersible DDT applied by power sprayers to all surfaces of the barn interiors will keep barns practically free from flies for 6-8 weeks. Likewise, 2½ %-5% emulsions will do the same while a 5% spray in oil will last for an entire season when applied to smooth, painted surfaces.

The important point seems to be the amount of DDT deposit in terms of grams per square foot. Apparently, at least 125 grams per square foot is necessary. With any less amount, the residual action gradually dissipates and the application must be repeated.

On concrete and rough wood surfaces it seems that the water dispersible powder is preferable. Since emulsions and oil solutions are absorbed through the skin, the operators using such materials should be protected by rubber gloves and oil-skin clothes, a precaution that is unnecessary with the water suspensions.

Feed and hay chutes should be closed, water receptacles covered and bedding or loose hay removed, especially in calf barns. Spray long enough before animals are admitted to the barn so that the application has time to dry.

The most extensive experiments with cattle spraying have been done in Kansas. There cattle were sprayed with power equipment in groups of 8-10 animals with .02% water dispersible powder for horn fly control. This application to the backs and sides of the animals was effective for 6-8 weeks. The gain in weight per animal was about 37 lbs. for several thousand cattle, as compared with an equal number of unsprayed animals. No damage of any kind to the animals developed.

Limited spraying of dairy and beef animals in Maryland disclosed no bad effects and one spraying per week with hand equipment seemed to be effective in protection of the animals for about one week. Possibly spraying dairy animals with power equipment with .02% DDT in water would be more effective and since we know so little about the physiological effects of the new emulsions that would be the wiser course to pursue.

Lice on cattle have been controlled with speed and effectiveness by dusting with 10% DDT in pyrophyllite, using about ¼ pound per animal applied by hand dust guns. Applications can be made by hand but this takes a longer time and it is more difficult to get the material on the underparts. One and at the most two applications should be effective in

keeping cattle free of lice. Until one has seen the improvement in condition and flesh of treated animals, it is hard to realize how serious lice infestations may be.

As a sidelight, you may be interested to know that treatment of chickens on the roost with 20% DDT dust applied by a rotary hand duster is remarkably effective in destroying chicken lice. Likewise, the spraying of chicken houses with emulsions of DDT will kill bedbugs that so frequently invade chicken houses. Also, fly control in chicken houses and hog houses is one of the uses for which DDT in any form can now be fully recommended.

Let me repeat that you must use DDT with care. It is taken up by milk and by the fat of animals, so great care should be exercised in its use around dairies and on milk cows. It is not a panacea and should be used only as recommended on the basis of adequate experimentation and experience.

HISTORY, NATURE AND THE PROBLEMS OF THE MEAT PRODUCER

A. N. DUCKHAM, O. B. E., M. A., Agricultural Attache
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History and Nature both gave low priority to specialized or efficient meat production and placed many obstacles across the path of the breeder and feeder of beef cattle, hogs and mutton sheep, who has had and still has an uphill task in overcoming them. Study of the influence on meat production of the social and economic aspects of history, on the one hand, and of the physical and biological aspects of Nature on the other, are useful in tackling many problems. This paper, therefore, briefly traces the relation of some phases of human history and of the science of animal physiology to the concrete problems of breeder and feeder of meat animals with special reference to Britain.

Early Functions of Domestic Livestock

Among the early pre-Christian civilizations of the Middle East, among our ancestors in Europe, and among less developed rural populations in many parts of the world today, horses, cattle, sheep, goats and hogs and other domestic livestock were and are kept for reasons which, in these days of specialized and highly efficient milk and meat production, appear strange and uneconomic. Livestock were and are maintained

- (1) For social and religious purposes,
- (2) For work, e. g. (in ploughing or operating early grain mills),
- (3) As sources of raw material (hides, skins, and wool etc.),
- (4) For food (meat and milk), and
- (5) As contributors, mainly through their excreta, to soil fertility.

Social Purposes

The Masai and Bantu of Africa and many similar less developed pastoral and grazing tribes in other parts of the world, keep cattle, sheep and

goats as tokens of wealth and prestige in the same way that we use dollars or pounds sterling. A man with large herds enjoys, like the patriarchs in the Old Testament, high esteem amongst his fellow men. He can use such livestock as, for instance, currency to buy a wife, as a sacrifice if his son is ill, to trade for food or more rarely, to slaughter and eat with his friends on a public occasion such as a wedding or a funeral. To the early Romans, the word for money and cattle was, in Latin, the same, viz, *pecus*. To many of the Hindus of India, the cow is sacred and may not be slaughtered; hence, as amongst other peoples where livestock are kept mainly for social reasons, excessive numbers tend to accumulate. In the absence of endemic disease, this results in overgrazing and finally soil erosion. Hence, the hoarding of livestock may have been a contributory factor in the decline of the economic basis of the pre-Christian Middle Eastern and Mediterranean civilizations.

With the thoroughbreds, dogs, cats and other pets which modern western civilizations keep for social purposes, there has been considerable selective breeding and improvement. But to many less developed pastoral peoples "four legs, a skin and a beating heart" are the only requisites of livestock kept for currency or social purposes. Under these circumstances there is no incentive to improve, for, as long as they merely remain alive, they meet the needs of their owners.

Work

Even today, horses, mules, donkeys, camels, cattle, water buffalo, yaks, elephants, sheep, goats and even dogs are, in various parts of the world, used for work. The larger animals are used to plough, to draw wagons or farm implements, and as pack or riding animals; the smaller ones for portage, or for drawing sleds or light wheeled vehicles.

Outside the major western civilizations, cattle and water buffalo are the main work and draught animals and sources of power—other than human labour. Even today, cattle are sometimes used for draught in Western countries; 40 years ago Sussex cattle could still be seen ploughing in Southern England whilst 150 or 200 years ago horses had yet to gain their now declining ascendancy as work animals. As more grain and fodder crops became available, their speed and their handiness in pulling the new horse hoes and horse drills then coming into use, demonstrated their advantage over cattle. Draught cattle, like the original Sussex or the modern Afrikaner, necessarily have heavy fore-ends; it is difficult to make out of them a carcass with well developed loins and hind quarters. Two hundred years ago, beef came mainly from worn-out draught cattle and cows, thus until the horse largely replaced cattle at the yoke, the beef breeder had little chance to select for good hind quarters.

Raw Materials

Early civilization, and even our European ancestors of 300 or 400 years ago, depended much more than we do on livestock for the material comforts of life. Before the days of cotton, wood pulp, synthetic fibres, and rubber, our clothing, bedding and footwear came mainly from hides, skins and

wool, though flax was early used as a fibre crop. Leather, felt and parchment windows (made from intestines) were (and in places still are) used in "housing". In dry, woodless countries—as in India today—animal manure was and is collected, dried and used for cooking and other heating purposes. Leather buckets, leather thongs, drinking horns, writing parchment, goose-quill pen-points, bone needles, tallow candles and many other similar uses show how, before the modern industrial era of iron and steel, everyday life depended considerably on raw materials derived from domestic or hunted livestock. The scientists have not yet produced adequate substitutes for the peculiar insulating and heating qualities of leather and wool, but, except in range and desert areas which can produce little else, hides, skins and wool are no longer the major products of animal industry. Four hundred years ago, however, these animal raw materials were probably at least as important as meat to the livestock owner. This may have been another factor impeding specialized meat production.

Fertility

Although we know today that the excreta from a well fed fattening animal is richer in plant nutrients than that from an under-fed beast, our ancestors probably made no such fine distinctions. They realized, of course, that animal excreta improved the yields of their crops and pastures and enhanced the texture of the soil. But as makers and spreaders of manure, underfed "scrub" cattle or sheep seemed as good as improved animals—in fact probably better because they could rustle or feed themselves with little or no hand feeding or attention. The "golden" hooves of unimproved sheep can consolidate light soils and the mouths of scrub cattle can eat down coarse grasses which are impeding the growth of sweeter grasses just as well as the best pure breeds. In England today, farmers are still willing to lose money on keeping cattle or sheep to make and spread manure, on the hand feeding sheep on outlying or awkward fields to which it is expensive to cart and apply farmyard manure or in yard fattening steers to make manure to apply to row crops. They reckon that they gain in better crop yields what they lose in terms of cash in feeding such livestock.

Food

Available data suggest that meat and milk were not eaten much by the man in the street or the dirt farmer in Babylon or Egypt, just as today animal products are very minor though popular items in the diets of the less developed settled agricultural communities of India, China, the Middle East and Africa. Even nomadic pastoral tribes, though popularly supposed to live on the produce of their flocks and herds as they wander from one grazing area to another, are *not* usually great meat eaters in practice. For instance, many contemporary Arabian pastoralists feed mainly on barley bread and camel milk and only eat meat on special occasions. Again the Masai of East Africa, a pastoral tribe, live on millets, maize and vegetables (which they get by trading hides and skins with neighboring crop-growing tribes), on wild honey, and game (which they collect or hunt themselves) and on milk, butter and blood from their own herds.

They obtain blood from living cattle by puncturing a neck vein with an arrow, drawing some off and then sealing the vein up. Domestic livestock are only slaughtered by the Masai for "public ceremonies and family feasts, but meat must not be eaten in the camp . . . it is cooked, and served in secluded spots . . . Meat and milk must never be eaten on the same day . . . The infringement of this rule would, it is believed, cause serious disease among the cattle."* Moreover, apart from a natural hesitancy to destroy their wealth or social capital or the draught animals without which they could not grow their crops, most of the less developed peoples have barely enough food to meet their own needs; they cannot afford to devote land and grain to livestock raised solely for slaughter.

The Agricultural Revolution of the Eighteenth Century

Until the development of modern agriculture in the latter part of the 18th century, domestic livestock remained "jacks of all trades and masters of none." In the same way in many less developed areas they are even today simultaneously sources of work, raw materials, food, fertility and social capital. Two to three hundred years ago European livestock had in summer to live on what they could pick up in the forests, on the common grazings and wastes and on the weeds growing on the fallows and stubbles of the unfenced open fields on which each farmer grew his own few strips of grain. In the winter, stock half-starved on poor hay, straw and dried leaves etc.; they lost half the weight they gained in summer; cattle took 5 to 6 years to mature. Under these conditions "stock breeding was the union of nobody's son with everybody's daughter." Without fences and separate paddocks, selective mating is difficult; it is impossible to segregate the better animals and feed them well enough to find out which are the best meat or milk producers; the control of contagious diseases by isolation is impractical with communally grazed herds.

Gradually the old system of open fields for crops and of common grazings for livestock, gave way in Western Europe (whence most of our present livestock breeds originated) to enclosed (fenced) farms with individual fields partitioned by hedges, ditches, etc. Under the old soil exhausting rotation, each of the three open fields of the community grew first wheat or rye, next rye or barley or oats and was then fallowed and grazed. In the eighteenth century, this was revolutionized by the introduction of clovers and of such row-crops as turnips and swedes (rutabagas); these helped to restore fertility, to increase grain yields, to reduce weeds. They greatly increased supplies of winter fodder. Horse drawn hoes and drills replaced hand labor, horse ploughs gradually supplanted ox ploughs, and finally in the nineteenth century came the reaper and then the binder to complete the revolution on which modern agriculture is based.

Bakewell (1725-1795) of Dishley, England, who was the father of modern stock breeding, seized his opportunity. The hour produced the men. At

*Forde, C. Daryll, "Habitat, Economy and Society." Fourth Edition. Methuen & Co., London, 1942.

last, conditions permitted controlled and selective mating to replace promiscuous breeding and enabled Bakewell, Bates, Booth and their successors on both sides of the Atlantic to select and breed from animals which responded to better feed supplies by bigger yields of milk and meat. ("Half the breed goes in by the mouth"). Bakewell bred "in-and-in" but discarded rigorously; he kept the skeletons or pickled cuts from the carcasses of his most successful animals so that he could check external conformation with internal carcass quality.

The Physiological Priority of Meat

When eventually history, or more accurately the development of agriculture and social techniques, finally permitted controlled breeding and feeding, the meat producer, however, still had to contend with the low physiological priority with which nature endowed meat (i. e. muscle and fat).

In the first place, the ancestral types to which our modern breeds can finally be traced, were built for speed in fleeing from enemies; they were leggy and heavy in the fore-ends as we can surmise by studying the conformation of the remaining buffaloes or wild boars. In the case of cattle, these characteristics were probably not fundamentally changed by several thousand years at the yoke because draught cattle tend to be heavy in front and light behind whilst before the days of paved or hard roads, long legs were an advantage to draught cattle on the muddy tracks. Thus, Bakewell and his contemporaries had to start with animals of bad meat conformation and carcass quality.

Secondly, recent research (especially by Hammond and his colleagues at Cambridge University in England) has explained what has long been observed but not fully understood by stockmen. When the food intake of an animal is low, the brain and nervous system (including the eyes and the sense organs), the digestive and reproductive systems, and the skeleton have first call on the nutrients available in the blood stream. When these needs have been met, movement (work) and lactation (milk), seem to have next priority whilst muscle (lean meat) and finally fat have the lowest priority. This seems to be true at all stages, during the foetal stage in pregnancy, during growth and development in young animals and also in mature animals. Horses lose flesh during the hard work of harvest; heavy yielding cows lose flesh during lactation if they cannot be persuaded to eat enough. Half fat cattle put out to rustle on poor pasture will lose flesh but continue to grow in the skeleton. Thus, specialized high quality meat production is really only possible under feeding conditions which leave an ample margin for muscle and fat formation after the high physiological priorities of the body have been met. From this, it follows that pure-bred bull and heifer calves should be well fed; otherwise they cannot realize the full potentialities of their genetic make-up and the breeder cannot pick out animals most likely (other genetic factors, e. g. percentage of inbreeding, being equal) to carry high meat producing capacity.

Thirdly, conformation and carcass quality, even of the best bred meat animals, depends on the way they are fed. At birth, livestock have a low percentage of carcass to liveweight; newly born hogs, for instance, have a high proportion of head, neck and legs (i. e. the less valuable parts of the carcass) and a low proportion of the most valuable parts of the carcass (e. g. loin and upper hindquarters). As the animal grows, the shape of its body alters and the proportion of muscle and fat to other tissues changes. The "maintenance" parts and tissues (such as the head, legs and digestive tract) develop early in life; the production parts and tissues, e. g. loins and hindquarters and muscle and fat develop later and the body deepens and thickens. In unimproved animals, these valuable later developing parts hardly develop at all; in well bred, well fed meat animals they develop rapidly early in life. Waves of development start at the extremities (e. g. legs and head) and meet over the loin. In stock (even with a good "meaty" genetic make up) which is underfed, however, this wave of muscle and fat development may, in effect, never reach the loins. Thus, not only have muscle and fat a low general priority but meat in the most valuable parts of the carcass has a still lower priority. Ill fed young stock grows in height and becomes leggy and rangy and heavy in the fore end but lacking in meat; even if, subsequently, such animals are well fed it is then too late to turn them into carcasses with plenty of meat in the most valuable places.

Although of course, dairy cattle are not selected for fleshy loins and hindquarters, the growth and development processes are essentially the same; hence, by high feeding early in life, it is possible to flesh the hindquarters and nearly hide the "hooks" of some dairy types (e. g. Dual Purpose Dairy Shorthorns, some Holsteins).

Application to British Problems

This problem of making reasonable beef from the calves of dairy type cows is at the center of many of our long term cattle breeding difficulties in England today. For many years Shorthorns of dual purpose type predominated in England and the better herds frequently average 8,000 lbs. of milk or more per cow per annum and gave a fair carcass of beef at the end of a useful life of several lactations. Their steer calves would fatten readily at about 1,000 to 1,100 lbs. live weight when 2 to 2½ years old and yield meat which, although perhaps not up to Angus standards, successfully met most competition. However, it must be admitted that many of these herds fell far short of this dual purpose standard.

During the years after the 1914-18 war the dairy industry extended and became more specialized, many herds being organized to give high production. At the same time there was not a clear demarcation between the beef and the smaller milk producer operating with dual purpose cattle, but the tendency is now for the dairy side of dual purpose to be stressed and the change over has been accentuated by war conditions requiring milk to be a first priority. In the past dual purpose breeders followed a line of selling (a) butter grocers (b) down calving heifers to the dairy farmers near the centers of population (c) feeder stores for

fattening on the rich lowland grazings or in feed lots to crop growing regions. This method suited rearers, dairy men and feeders alike, and used our land to the national advantage. Recently, however, mainly because of the rapid growth of milk selling, this system has been breaking up. Holstein, Ayrshire, and other dairy bulls have been rapidly increasing whilst the number of Shorthorn and other dual purpose and beef type bulls has been falling. Crossing—sometimes indiscriminate—has been extensive. As the result, our cattle population is tending to become milkier but more mixed in genetic type and there is a shortage of meaty calves suitable to rear for subsequent fattening into beef.

The British Livestock Improvement campaign is therefore complicated by the rise of milk selling and by the controversy between those who favor the traditional dual purpose breeds and the advocates of single purpose dairy herds. But the industry does not allow these debates to become an excuse for the use of bulls of poor type. All bulls of the prescribed age (10 months) must have a license from the Department of Agriculture. Since 1934 licenses have been refused for bulls which did not reach the required standard as regards health and conformation. Amendments to the legislation dealing with the licensing of bulls were introduced in 1945. The new Regulations represent a further step in the development of livestock improvement through the provision of better quality sires and of means whereby the ordinary farmer can more readily identify the type of bull most likely to suit his herd. There are now three types of license for bulls in England and Wales, viz (a) Beef license, (b) Dairy (official Milk Record) license and (c) a General Class license. Bulls ineligible for either a Beef or a Dairy license may be granted a General Class license, provided they reach the current licensing standard in regard to health, type and conformation.

All bulls must conform to the standard of type laid down for pedigree bulls of that type. This, in effect, means the elimination of all cross bred bulls.

The qualifications required for a Beef or Dairy license enable the farmer to make sure that the bull he buys is of a type suitable to his herd and his farming system.

The Premium Bull scheme financed by the Government to help small farmers is another aid to livestock improvement, whilst artificial insemination, also under the control of the Government, is making marked and rapid progress and may well result in the mass production of high class dairy cattle.

Further, English cattle owners are encouraged to have a consistent breeding policy. Owners of high yielding herds are encouraged to use proven sires or bulls of good milking ancestry and to rear their heifer calves. Owners of low and moderate yield dairy herds or of "flying" herds (where cows are bought in for only one or two lactations and then sold for slaughter) are encouraged to use beef bulls in order to "color mark" their calves, e. g. to get white faced calves by Hereford bulls or

polled blue calves by Aberdeen Angus bulls. These color marked calves are keenly bought by those who rear calves for ultimate fattening whilst the dairyman with low yielding cows can replace the animals he discards for age or disease by buying in pure-bred heifers from high yielding herds. In this way it is hoped to continue to improve dairy herds without unduly prejudicing the beef quality of the calves we need to rear for meat.

This policy means a good deal of movement from farm to farm, often through markets. Disease risks are therefore higher than in self-contained herds, which breed and rear all their own replacements. Partly to meet this difficulty, but mainly as a frontal attack on cattle disease, the Government has recently experimentally introduced a bovine equivalent of a health insurance scheme. The farmer who wishes to participate, pays so much per year to his veterinarian. The latter examines his herd four times a year and advises him particularly on the control of tuberculosis, contagious abortion (Bang's disease) and on mastitis which, as in the U. S. A., is now one of the English dairy farmers main headaches. The Government provides laboratory diagnosis (where necessary), also S.19 abortion vaccine (an American development) and sulfa drugs (in suitable cases) for mastitis.

The increasing numbers of dairy type cattle means, however, that, if they are to make reasonable beef, our cattle must be well reared and well fed; otherwise we cannot "hide the hooks" and make reasonably fleshed hind quarters. Unfortunately, however, at present we are desperately short of grains and of oilseed meals. Our grassland improvement campaign is aimed to help to offset this shortage and to give our calves and feeder cattle more of a chance to develop good hindquarters and not just grow into tall and rangy steers with hooks which no amount of last minute fattening can hide. Finally, before the war, we paid a quality premium on all cattle qualifying for our beef subsidy. This has been dropped during the war, because we needed quantity rather than quality, but no doubt when our present cattle marketing system is revised to meet peace time needs, then quality premiums to encourage both good breeding and good feeding for beef will be reintroduced.

Conclusion

Our ancestors, like less developed peoples in many parts of the world today, kept livestock for social purposes, for work, as sources of raw materials and soil fertility and for food. As long as cattle and sheep remained "jacks of all trades and masters of none," specialized meat production was impossible. Selective breeding and feeding of meat animals could not develop until the old European open field and common grazing system was dying. The agricultural revolution of the 18th century raised bread grain yields, increased winter fodder crop supplies and stimulated the growth of fenced farms and fields. These factors enabled Bakewell (1725-1795) and others to develop the livestock breeds we know today.

Bakewell, who farmed at Dishley, England, had, however, to contend with the heavy fore end and poor meat conformation with which Nature

and thousands of years at the yoke had endowed the native cattle. Like his successors today, he also had to overcome the low physiological priority of meat (muscle and fat). When feed is short, those parts of the body needed to keep the animal alive have first call on available nutrients; meat is a "residual legatee," especially over the loins and hindquarters, i. e. in the most valuable cuts of the carcass. Meat animals can, of course, be selected for early developing and well fleshed loins and hindquarters. However, in England today, the increasing use of dairy bulls makes it difficult to find enough calves (to rear for fattening) which even good feeding early in life can flesh over the hindquarters.

To meet these problems, ordinary English milk producers are often advised to use beef bulls on low yielding or nondescript cows, to sell the resulting calves for beef production and to replace their cows (where necessary) by buying in heifers from high quality dairy herds. All bulls in service must have a Government license of suitability, whilst the Government makes cash payments to help farmers to use good bulls and to make good beef and stimulate various methods of cattle health and of grassland improvement.

REPORT
OF THE
ANNUAL MEETING
OF
Maryland Tobacco Growers'
Association
January 9, 1946

The annual membership meeting of the Maryland Tobacco Growers' Association was held at the Lord Baltimore Hotel on January 9, 1946.

The meeting was opened with an address of welcome by Roy C. F. Weagly, President of the Maryland Farm Bureau. Honorable Theodore R. McKeldin, Mayor of the City of Baltimore, then welcomed the growers on behalf of the City.

President C. Carroll Lee of the Maryland Tobacco Growers' Association, stated that the policy of the Association is to render broad and efficient service to its patrons. He stressed the fact that cooperation is the answer to many problems that the farmer is facing and will have to face during the reconversion period.

George Sachse, General Manager of the Maryland Tobacco Growers' Association, outlined the economies of selling tobacco through the Association under the hogshead system. He pointed out that the difference in average prices of tobacco sold by the Association over the Loose Leaf Auction system has amounted to more than 22c per pound during the last five years.

Mr. Sachse attacked the critics of the Federal Income Tax Exemption given to cooperatives. He pointed out that cooperatives are under siege by certain private interests which contend that cooperatives pay no taxes. He explained this by stating that "Cooperatives pay every tax that private business pays with the exception of Federal Income Tax, and the reason for Federal exemption is that a true cooperative owns no profit due to the fact that any income derived from its operations belongs to its patrons, who in turn pay income tax as individuals on such income rebate to them. He pointed out further that any private business can rebate its income to its patrons and enjoy the same privileges as a cooperative; so that cooperatives have no monopoly on this system of doing business.

Dr. T. B. Symons, Director of Extension, University of Maryland, called the membership's attention to the necessity for grasping the golden opportunity to increase tobacco production. Most producers, he said, fear

surpluses, but when dealing with Maryland tobacco, there is a considerable demand for every pound of quality tobacco that the Maryland growers can produce.

"Seventy-eight hundred acres of Southern Maryland land are idle," Dr. Symons declared, "and if each of the 5,000 growers in the area will increase his planting this year by two acres, the 50,000 acre goal for 1946 can be reached."

To stimulate production, he suggested establishment of community sponsored seed beds to provide sufficient plants. He asserted that farmers generally have not made the best possible use of available labor and urged research along this line.

Joseph H. Blandford, head of the U. S. Department of Agriculture's Production and Marketing Administration office in Maryland, announced that crop insurance on an experimental basis will be available this year to Charles County farmers. This county was picked as one of the 20 counties in the United States in which experiments will be conducted this year.

Joseph E. McCue, Purchasing Agent for the Maryland Tobacco Growers' Association, explained that wartime shortages have not been overcome, due in large measure to the strikes which have delayed reconversion. He felt that this situation would be improved within reasonable time, and that necessary products may be produced to help farmers to some extent in their 1946 production.

Officers for 1946

President—C. Carroll Lee.....	Annapolis
Vice-President—Xavier W. Garner.....	Spring Hill
Secretary to Board—Thomas W. Jones.....	Lothian
Treasurer—Russell W. Cross.....	Croome

Directors

C. Carroll Lee.....	Annapolis	Anne Arundel County
Thomas W. Jones.....	Lothian	Anne Arundel County
Estep Watson	Owings	Calvert County
Allen S. Bowen.....	Huntington	Calvert County
Walter W. Bowling.....	Newport	Charles County
X. W. Garner.....	Spring Hill	Charles County
Russell W. Cross.....	Croome	Prince Georges County
Paul J. Abell.....	Bowie	Prince Georges County
J. Ralph Abell.....	Leonardtown	St. Mary's County
Ernest Lane	Valley Lee	St. Mary's County
Glen Browning	Monrovia	Upper Country

(Honorary Members)

W. B. Posey.....	Upper Marlboro
George I. Gardiner.....	Bryantown

Maryland State Poultry Council

Summer Meeting



Salisbury, Md., August 9, 1945

OUTLOOK FOR THE POULTRY INDUSTRY IN 1946

JOHN W. SNODDY, President

As we go into the New Year indications are that the outlook for the poultry industry is not particularly rosy. It would seem that demand on the part of the buying public for poultry products will decrease rather than increase. Unsettled labor conditions, increasing unemployment and reduction of working hours tend to reduce the purchasing power of that group which depends upon weekly income for buying power. Poultrymen should prepare themselves for this slump.

Flock reduction is obviously indicated. The Maryland Farm Groups Council has recommended a reduction of 13%. That figure would seem entirely too low if we are not to be faced with a below-cost of production market. A 25% reduction would go further toward insuring us against an over-supply. We know from experience how prices topple when the supply is greater than the demand. As Fred Allen says:

*The Nation's hens go blithely on
And daily do their stuff;
For hens are hens and every hen
Must lay on, like MacDuff.*

In 1946 special attention will need to be given to the quality of poultry and eggs produced. With meat no longer rationed and with less money to spend, the public will demand the best in poultry and eggs. Broiler growers need to be able to meet this demand by developing a better broiler

with more breast meat. A comparison of the price the housewife pays per pound for dressed fryers and for steak shows steak to be the better buy. At present prices the cost for edible meat is approximately 50 to 55 cents for the steak and 75 cents for chicken.

More attention must be given to maintaining egg quality through to the consumer. The labor required to handle eggs properly will pay large dividends. Under Maryland's Fresh Egg Law, eggs must be graded or sold as unclassified. Baltimore quotations for January 5 were: Unclassified, 37-38 cents; consumer grade (large), which is top quality, 45.1; extra large, consumer grade, 53.8. A little extra care pays. In order to obtain top prices, eggs should be gathered often in wire baskets and placed in a cool, moist room to cool thoroughly before packing. All eggs should be clean and should be graded and packed according to weight. It is important to pack small end down. This keeps the air cell in its proper place. Market them every three or four days.

In 1946, we shall need a strong organization officered by broad-minded persons who have the interest of the entire poultry industry at heart. The membership of our county associations must be built up. We must support whole-heartedly our state and national poultry and farm organizations. It is through them that we work for the betterment of our industry. An example of the desirable results of all groups cooperating is one that affected the broiler growers. At the end of the war, Government purchases for the armed forces were stopped abruptly. Broiler growers were faced with heavy losses; in many cases with bankruptcy. Quick action on the part of representatives of all groups working together resulted in the Quartermaster's Corps' re-entering the buying field for 90 days, thus saving broiler growers from severe losses. This one example should convince every grower of poultry of the need for supporting farm organizations. If everyone would get behind his association and push, we could take the lead in setting prices and controlling markets. Join poultry and farm associations, work in and through them and have a strong voice in shaping the policies for our industry. Cease being told. Carry on in the democratic way.

The year 1945 was a period of adjustment for our industry. With the war in full blast at its beginning, the industry was keyed to war production. It was functioning under numerous Government controls. Farmers and poultrymen worked faithfully and effectively without complaint. Adequate help was unobtainable. The year 1946 will also be a period of adjustment. The same qualities of perseverance, resourcefulness, and loyalty that supported us then will enable us to meet the challenge of new conditions. Building upon such a foundation we need not fear the future. So—a prosperous New Year to the farmers and poultrymen of our great State!

PRESENT STATUS OF GOVERNMENT REGULATIONS AFFECTING POULTRY INDUSTRY

C. W. HALDEMANN, Poultry Section, OPA, Washington, D. C.

In four sweeping actions the Agricultural Department brought to a sharp end Government procurement in the nation through set-aside orders.

The actions taken by the Agricultural Department were:

1. Cancellation of WFO 119 in North Carolina, where Government purchases were made entirely for the War Shipping Administration.
2. Suspension of WFO 119 in important producing counties of Delaware, Maryland, Virginia, West Virginia, Georgia, Arkansas, Oklahoma and Missouri.
3. Termination of WFO 142 which took 50 percent of all kinds of chickens going to authorized processors in 12 Mid-Western states—North Dakota, Nebraska, Kansas, Iowa, Missouri, Wisconsin, Illinois, Indiana, Oklahoma and Texas.
4. Termination of WFO 125 directing that all canned poultry production be held for purchase by the armed forces.

The military has acquired more than 200,000,000 pounds of chicken under WFO 119 since it went into effect December 8, 1944. The army recommended that the order be lifted temporarily for the three-week Jewish holidays in September. However, Agriculture Department privately predicted that the order will never be reinstated, and certainly not until near the end of the year.

Under WFO 142, Army Quartermaster Corps hoped to buy about 125,000,000 pounds of chickens, primarily for canning, during the next two months. In the short time it had been in effect—since August 13—5,000,000 pounds had been purchased.

The canning order originally went into effect in February. It was suspended for a 60-day period on July 31 during the period of low production. Canning will be done under army contracts with cannerys.

Government food planning officials who have run the gamut of surplus and shortage in the poultry and egg field in the last two seasons, today already were drawing up plans for an elaborate price support program which they felt certain will be called into play in the spring of 1946.

As the industry well knows, in response to high war demands, egg production expanded enormously during the years since Pearl Harbor. Eggs went to war in a big way. However, the sudden end to the Pacific war completely changed the outlook for the coming year. Egg production was cut back somewhat this year, after last year's expensive experiences in over-production. However, it still ran much above normal. With the meat shortage, the demand was high and is likely to stay that way through most of the rest of 1945.

However, red meat will soon be back on the market in an estimated 25% higher quantity than civilians had thus far this year. Poultry supplies will be abundant. Military demands will be cut markedly for dried eggs and, while some may go abroad as exports, the market for relief areas is likely to be relatively small.

These factors all add up, officials agree, to a sharp reduction in the demand for eggs next spring. Laying flocks again are at a high peak because of a very high production of chicks which may not all be sold in the form of poultry meat.

BREEDERS' PROBLEMS AND THEIR SOLUTIONS

MRS. W. W. HOPKINS, Cordova, Maryland

Well folks, this is a big issue, much too big for me, but I will just make a few observations as I see them. As the industry grows, many of our problems grow likewise. We are conscious of the great work that is being done in research and experiments through the many agricultural colleges of the nation which are achieving wonderful strides, but the poultryman, and especially the breeder has a big job ahead of him in order to partially overcome some of the basic troubles that come to us from various sources.

There is a difference of opinion among breeders as to the age of the birds which are producing the hatching eggs. Some are quite clear in their minds that they desire eggs from only yearlings that have been trapped, in the pullet year, and have not only proven their ability to produce the kind of eggs wanted, but are free from paralysis and pullorum-disease—two very costly diseases, and I understand both are inherited, with the paralysis rating No. 1. There are many others who are loud in their claims of pullet production for hatching. Both groups have practical reasons for so thinking. But breeders should remember that producing eggs for chicks for fast growing and early feathering broilers that are to be sold early, and chicks for replacements in the breeding flocks, to my mind are some different. I grant you pullets lay more eggs than do the hens, but unless they are hatched early, well cared for as to feed, housing and selection, they will often lack the stamina to carry on a production that will be very profitable and pay a dividend in the business.

I have no fuss with the hatcherymen, but the breeder-hatcheryman has a great advantage over the breeder who has to send the eggs off the farm for incubation, and we cannot all hatch our own chicks, and sometimes we run into difficulties through that channel. I believe lots of the trouble is being corrected each year, and the producer of hatching eggs and the hatcherymen are working together more cooperatively to get better results all the way around. You know the hatcheryman has the final analysis of the deal in his hands. We should produce eggs from mature birds that have been culled, tested, and inspected. Our procedure for our small flock, is to cull when we put them in the laying houses, cull until we

can get them tested, cull when testing, and cull every week thereafter. You may think this plan is not sound; well, it pays us one thing—we have a steady market for all the birds each week, and we feed less boarders in the house.

As a part of the solution for a more profitable breeder business, closer relationship between producer and hatcheryman, with rigid culling, tube testing, sanitary housing, proper balanced feeding and staying on the job, if you want to get results, and any compensation besides glory out of the job. By doing so you will be doing your bit to place the poultry industry of Maryland permanently on the map.

And may I reiterate, by using all information possible, try to secure chicks from breeders who can give you a clean record as to paralysis where possible. It is one of our greatest menaces and very costly, affects the birds even after you have them ready for the laying houses, and is deadly in its complications.

I would strongly recommend to the practical poultry breeder to pay more attention to this disease in the future. Try, if possible, to secure chicks or eggs from breeders who are working on control measures for this trouble. Let us who are deeply interested in the future of Maryland's leading agricultural industry do our best to interest the breeders to put in more and better layers in their houses in order to secure more of our eggs for the home hatcheryman. If so, we can reach our goal, a better and brighter future for the poultryman, the consumer and marketer.

Let us, as Maryland poultry folks, wake up to the possibilities and opportunities of the industry.

OUR INDUSTRY AT THE CROSSROADS

LEON TODD, Secretary, Northeastern Poultry Producers Council

The egg and poultry meat industries are at a cross-road and, fortunately, we have some time to look in all directions before making a decision as to which way to go. There are some outsiders who would like to make this decision for us; what is done will undoubtedly depend upon the industry itself, and there is not too much time.

Producers of eggs, poultry meat of all types, turkeys, every hatcheryman and breeder, and by all means every handler of our products, can be affected. Conditions as they are today call for some mighty serious and straight thinking by everyone. Let's not back away from the problems.

Of immediate importance is the complicated problem of surplus. We are no different than many other industries except that we do not have a direct war contract with the government. Ours is a law which says that egg and poultry prices (along with many other farm products) shall be supported at 90 percent of parity for two years after the declaration that hostilities have ceased. That declaration has not been made as yet.

Lest we take for granted that our reconversion will be easy, we should not forget that we have no subsidy to get out from under. If we had a subsidy paid to producers, then we would be faced with the decision to arbitrarily take it off or increase the cost of living. We should all be thankful there is no subsidy tied to the poultry industry.

Now the situation does become complicated. Producers will be asked to produce abundantly so that food will be low in price. Meanwhile strikes abound and producers can't get the much needed farm machinery. No one will get new trucks for some time. We need patriotism more than politics in reconversion. Here's another tough problem. We told a congressman "the more that Congress pays out in unemployment compensation, the more surplus food they will have to buy." He said he hadn't thought of it that way.

How will "full employment" affect our industry? We do know that factory workers' wages have more influence on egg price levels than any other factor.

The industry's most potent instrument to encourage consumption, after we know we have good quality, is the Poultry and Egg National Board. That organization has done a tremendous job to date and will be doing more as the industry increases its support. When we think of millions for a single strike and then the battle it's been to get our consumer educational work under way, it is time for us all to get busy. Increased consumption means increased production—that's prosperity.

Through the depression and through World War II, our industry helped itself in a lot of ways. No AAA, no subsidies, improved quality, improved marketing and better selling. That's the road most everyone wants to get back to.

The producer will improve quality if he has the outlet that will pay him for his extra work. That is one reason why we find most every local producer group interested in and in favor of the proposed federal uniform egg and poultry grading program. Like other controls, no one would yell louder than the producer if it were made compulsory. A producer committee went to Washington to learn the policy. They were satisfied it will be entirely voluntary and are ready to help work out the program so as to benefit the industry. It can be made to do just that.

THE FRESH EGG LAW

RUSSELL C. HAWES, Maryland Egg Quality Program

At the last meeting of the State Poultry Council a resolution was passed naming a committee to draw up and submit to the General Assembly an Egg Sizing Law. As chairman of this committee, this act was drawn up and passed at the last session.

Instead of drawing up a new law, it was suggested by John Clark that the present Fresh Egg Law be amended. This was done, requiring two

sections to be amended. We now have a combination of a compulsory grading and labeling law. Our present egg law requires all eggs to be sized according to five definite standards "Extra Large, Large, Medium, Small" or, if not graded as to size, must be labeled and sold as "Unclassified." In addition, all eggs which fail to meet the grade of Fresh must be sold and labeled as Grade B or Grade C, respectively, according to the U. S. standards established for Consumer Grades for shell eggs.

I have prepared an Egg Bulletin which includes all egg legislation, rules and regulations promulgated for its enforcement, and suggestions for producers and retailers in the marketing of eggs as required by the new egg legislation. This bulletin is temporarily being held up until such time as the Board of Agriculture approves the rules and regulations.

As far as enforcement is concerned, very little is being done with the exception of the educational phase of the program and checking up on misleading advertising or improper and insufficient marking of eggs.

Recently we mailed around 1,200 letters to retailers in Baltimore City and County notifying them of the new egg legislation and acquainting them with the requirements of marking their eggs and other regulatory features of the law.

It is my opinion that during the present period of scarcity we who are charged with enforcing the new egg legislation should spend the greater part of our time in educating the egg trade as to the requirements of the new law, cooperating with egg handlers and retailers in their marketing problems, and laying the ground work for a real Quality Egg Marketing Program for Maryland at such time as conditions warrant.

QUALITY AND EDUCATION ESSENTIAL TO POST-WAR INDUSTRY WELFARE

CONRAD F. SMITH, Eastern Manager, Poultry and Egg National Board

Will the American public, which is now eating on an average of an egg a day per capita, and consuming more poultry meat than ever before in history, continue this huge consumption unabated after the war?

The answer to that question will determine the future prosperity of America's poultry and egg business, which has now risen to the status of a \$2,000,000,000 industry. It is one that every hatchery operator, every handler of poultry and eggs, and indeed every farmyard flock owner, would like to know.

To attempt to make a flat prediction as to how high the present war-born consumption of a public, flushed with the largest buying power in the world's history, will be maintained would be to guess the exact curve of the line charting national income and another line indicating prices of all foodstuffs. The dairy, the fruit, and the cereal people would all like to know the answer.

If all history is a criterion, the simple and inescapable economic fact is that after every war there comes a period of deflation, brought about by lessened incomes, with a resulting drop in consumer demand and buying power. We have every reason to expect that post-war years will bring somewhat similar conditions in this country. What can be done about it? Let us first look at the situation now.

The American public is eating more and better food than it ever has before, despite all grumbling over rationing and scarcities. Egg consumption is now about an egg a day per capita, which means 365 eggs in 1945 against an average of 306 eggs per capita during the pre-war years from 1930 through 1940, inclusive. Consumption of poultry meat is higher than ever before.

There is no argument that increased purchasing power, together with scarcities of other foods, have helped to bring about this tremendous increase in the consumption of poultry and eggs. But we of the Poultry and Egg National Board like to think also that the American housewife and her family are learning to appreciate more and more eggs and poultry in their diets. And we should like to think, too, that in the five years since the Board was organized the continuing program of consumer education has had an effect.

The answer to the question raised at the beginning lies in continuing consumer information service through the Board, constantly seeking new outlets, and repeating over and over the inherent merits of poultry and eggs in the human diet. Through its nearly 15,000 contacts in which this information is channeled to the American consumer, the Board is going steadily ahead with this work, certain of the support of the industry of which it is the mouthpiece.

And a part of the answer also will be found in the amount of research that the poultry and egg industry carries on to determine consumer preferences. The more exact knowledge that poultry and egg producers have of what the housewife, and the restaurant or hotel manager want, the better they can deliver it to them. This research will naturally entail studies of the best methods of preparing and displaying poultry and eggs so that there will be a day-by-day, month-in-and-month-out uninterrupted flow of these important foods from farm to table for the benefit of all concerned.

THE IMMEDIATE AND POST-WAR AGRICULTURAL OUTLOOK

DR. S. H. DEVAULT, Department of Agricultural Economics,
University of Maryland

Dr. DeVault reviewed war-time accomplishments in food production, farm prices, expenses and incomes. He referred to opportunities on farms and suggested that steps should be taken to avoid the mass return of ex-service men to farms. Opportunities in the poultry field will probably

be limited. Contrasts were drawn between conditions in the post-war periods following World War I and World War II. Emphasis was made of the difficulties involved in the reconversion phase following World War I.

He suggested that the poultry industry is faced with the necessity of undertaking adjustments downward in production. A survey showed that 1,610 farmers in Maryland plan to make repairs to poultry houses and 2,710 plan to build new poultry houses.

BUSINESS SESSION

Minutes of Annual Summer Meeting

Meeting called to order by President John W. Snoddy. Reading of the minutes of previous meeting suspended.

Treasurers Report—Mrs. W. W. Hopkins. Balance on hand last report \$633.08; Receipts \$1,466.45, war bonds \$1,000.00 and War Saving Stamp \$2.00. Total \$3,101.53. Expenditures \$1,242.82. Total net assets August 9, 1945—\$1,858.71. Report accepted.

Auditing Committee—R. S. Brown and A. R. Peterson reported that they audited the Treasurer's books and found the books in balance and well kept. Motion made and seconded that Auditing committee report be accepted.

Fresh Egg Committee—Russell C. Hawes submitted report-attached.

Report on Yearbook: Dr. M. A. Jull reported progress.

Business—Report that \$250.00 was appropriated by State Board of Agriculture for the Annual Poultry Products Show. Motion made by Mrs. Eckrich and seconded by Mrs. Hopkins that the Poultry Products Show be held. Motion approved.

New Business—Wade H. Rice submitted his resignation as Secretary of Maryland State Poultry Council. Allen Bradley moved that Mr. Rice's resignation be accepted. Seconded by Mrs. Hopkins. Motion approved.

Meeting adjourned 4:30 P. M.

Samuel Ahmuty, Recording Secretary.

Twelfth Annual Winter Meeting

Baltimore, Maryland, January 9, 1946

Over 100 poultry people attended the Fourteenth Annual Winter Meeting of the Maryland State Poultry Council held in conjunction with the Maryland Farm Bureau Federation. Interest in problems facing the poultry industry was intense because poultry production must apparently be reduced somewhat, especially as red meats become more readily available.

Due to the expansion of the poultry industry during the war years, the poultry industry of Maryland was the leading branch of agriculture in 1943 and 1944 as a source of gross farm income.

The following figures give the gross income obtained by Maryland farmers in 1944 from several of the more important branches of agriculture. The gross income given for poultry does not include the income from urban flocks, nor from ducks, geese, and guineas.

Poultry	\$40,508,000	Wheat	\$9,694,000
Dairy Products	39,814,000	Cattle and Calves.....	7,504,000
Truck Crops	22,997,000	Fruits	5,481,000
Hogs	11,422,000	Corn	4,164,000
The poultry income was obtained from the following sources:			
Broilers	\$16,781,000	Farm Chickens	\$8,159,000
Market Eggs	12,966,000	Turkeys	2,211,000

FUTURE BROILER PRODUCTION AND MERCHANDISING PROBLEMS

ROBERT ABERCROMBIE, North Georgia Poultry Association

Before discussing specifically the topic assigned to me, I would like to take just a few minutes to mention what the broiler industry in North Georgia has meant to that section of the country. The number of broilers increased from 3,500,000 in 1940 to 35,000,000 in 1945. The increase in value of the broilers sold in these two years was even greater, increasing from \$1,495,000 in 1940 to \$31,500,000 in 1945. We have imported enormous numbers of hatching eggs and baby chicks, although the hatching egg capacity in Georgia increased from 3,500,000 in 1940 to 9,500,000 in 1945.

Testing for pullorum disease has made progress because the tolerance of 10 percent allowed in 1940 was reduced to less than 2 percent in 1945. Mortality among broiler chicks also improved from about 20 percent in 1940 to about 10 percent in 1945 in the North Georgia area. In 1940 we had no processing plants for dressing broilers in the North Georgia area, but in 1945 we had 14 plants with a capacity of 1,500,000 pounds per week.

In 1940 in the North Georgia area the cash income per farm family from broilers was about \$250, whereas in 1945 it rose to approximately \$1,500.

The broiler industry is now the third largest industry in this area, being exceeded only by cotton and peanuts.

Another benefit from the growth of the broiler industry is the increase in soil fertility, especially when phosphate is added to the poultry droppings. Farm ownership has increased tremendously, and as a result of the increased returns from the broiler industry, houses have been painted, barns have been repaired, and more livestock has been purchased.

Now, a few comments concerning production problems in the future. First, I want to suggest different ways to reduce the cost of production and at the same time improve the quality of the broilers grown. I would first suggest cutting down the number of chicks per stove to 500 and increasing floor space per bird to about 1 square foot. This would lead to increased feed efficiency, decreased mortality, and improved quality by reducing the number of runts and culls. My second suggestion is breeding for a meat-type bird, especially for faster growth and better fleshed breasts. That I think, is one of the great needs of the industry. Also, breeding for resistance to disease is important. In our North Georgia area we have found a close relationship between the percent of mortality in any flock of broilers and the grade attained by those broilers when they are graded. The higher the mortality, the lower the grade, on the average.

One thing that could be done to improve conditions in the broiler industry in the future would be to pay cash for chicks and feed. To the individual broiler grower, that could easily make the difference between profit and loss. As a matter of fact, there is not much security in a 100 percent credit business. If you save one cent per chick on an order of 1,000 chicks by paying cash, you save \$10 right there. If you can save \$2 a ton by paying cash for feed, on six tons for 1,000 broilers you save \$12; and if you raise three batches of broilers in a year, altogether you save \$66 on 3,000 chicks by paying cash. Moreover, the broiler grower who has a direct financial interest in his enterprise will do a better job.

The broiler growers must get together and voluntarily control production in the future. At the present time storage stocks amount to 321,000,000 pounds and the broiler industry is threatened with seasonal gluts unless production is controlled in relation to seasonal demands. It is better to grow one chicken and make a nickel than to grow two chickens and take a loss. I would certainly suggest cutting down the number of chickens per stove and discourage new producers from going into the business at present.

With respect to merchandising problems, we can do much to improve the quality of broilers sold to consumers by grading them at the packing plants according to size and quality. Our packing plants must also do a better job in processing, especially in removing pinfeathers. Also, much can be done to learn how housewives desire their broilers and prepare them accordingly. There is not only a good future for eviscerated broilers, but I think there is an excellent future for cut-up chicken. It must be marketed in an attractive package and the costs of processing must be kept to the

minimum. Finally, it is possible that eventually broilers and fryers will be broiled and fried and roasters will be roasted in the processing plants, and then quick frozen for delivery to the housewife who will merely have to warm up the finished product before placing it on the table. Improvement in the quality of the dressed bird and more improved merchandising methods will do much to increase the demand for broilers.

LAYING FLOCK MANAGEMENT FOR PROFITABLE PRODUCTION

PROFESSOR LESLIE M. BLACK,

College of Agriculture, New Brunswick, New Jersey.

The basis for profitable production lies in the quality of birds upon which the individual poultryman expends his efforts in enabling them to reach the maximum of their capabilities. A good production record is hardly possible unless the flock brings with it into the laying pen a background of breeding for production and livability, the health that is encouraged as a result of the absence of serious disease outbreaks during the rearing period and a sanitary environment, and a freedom from the tendency toward cannibalism that may crop out with renewed vigor under the close confinement methods of production management. The future producers should have protection against disease outbreaks insofar as it is possible to assure protection. Fowl pox and laryngotracheitis can be safeguarded against through vaccination at an early age and no flock that is likely to develop either of these diseases should be denied the protection that vaccination affords. As competition increases in the post-war years, the need for healthy, well-bred, disease- and habit-free pullets will become increasingly important in any effort to obtain profitable production and continued existence in an egg-farming venture.

Given desirable birds, the poultry farm operator then has the opportunity to display his ability in meeting the requirements that are necessary in bringing out the latent productive possibilities that exist in the stock. The poultry business has often been referred to as a business of details and the longer-cycled phases of the business as egg production readily demonstrate the effect of detailed management.

The birds should be carefully graded and housed in as nearly uniform groups as possible. Such factors as age and uniformity in size and development should receive due consideration to the end that numbers of birds can be handled and fed as uniform units. Housing facilities need not be pretentious but should provide comfort and protection from sudden weather changes. Over-crowding is probably one of the chief enemies to a good production record and provision should be made to allow in the neighborhood of four square feet to each bird housed. Besides affording protection, the house should provide adequate lighting, ventilation, and equipment for the proper functioning of the birds. It should offer ease and efficiency of operation to the caretaker of the flock.

Feeding of the flock is of major importance, for egg production is usually in direct proportion to feed consumption. The ration should meet every

requirement of producing birds and should be offered in a manner that will encourage maximum consumption at all times. Low mash hoppers from which the birds can feed at floor level are, in my estimation, of importance to this end and also aid in discouraging the tendency to picking. The schedule of feeding should aim to maintain the birds' constant interest in the ration and should avoid overloading the crops of the birds at any time during the day, with the exception that the evening feeding of grain should be fed with the idea of furnishing a supply of feed to carry the bird through the relatively long night period. Maintenance of body weight is of utmost importance. Loss of weight is invariably followed by decreased production and seasonal variations should be made in the feeding schedule to make up for variations in the length of day that accompany changes from summer to winter and spring conditions. Heavy scratch grain feeding is closely associated with maintenance of body weight and in pullet flocks the emphasis should be placed on consumption of that part of the ration. Artificial lighting in addition to stimulating the egg producing organs acts as an aid to feeding practice and should assist in increasing total daily feed consumption.

Periodic culling of the laying flock is important in reducing seasonal mortality and in maintaining egg production at a profitable level. Individual birds are of relatively low value and ailing or unproductive birds should be removed from the flock for whatever salvage value they may have as soon as they are recognized.

The sanitary management of the flock should not be neglected. Poultry plant sanitation includes as one of its most important safeguards, the avoidance of contact with the outside. Diseases such as Fowl Cholera, Fowl Typhoid and, recently, Newcastle Disease, can be introduced in devious ways. Avoiding traffic in live birds and the introduction of infected materials from the outside, such as visitors, used feed bags and poultry coops, free flying birds, and roving animals, are all important in avoiding disease introduction. Frequent inspection of birds and quarters for insect parasites and proper treatment when found, should also be practiced if the layers are to function properly. The maintenance of a built-up litter in the pens and frequent use of hydrated lime to maintain its texture and dry condition are of importance in reducing dampness and an unsanitary floor.

Aside from the actual management of the laying birds, profitable production results when certain efficiency factors of plant management are met. Egg prices vary seasonally and the efficient producer should endeavor to make sure that a large percentage of his plant's production occurs during the season of highest prices—June to January. Labor should be used efficiently. Here in the East, it is generally thought that the individual should be able to care for a unit of 1,500 to 2,000 layers. With careful planning in building construction and management, it may be possible to decidedly increase this number. This may be increasingly important when profit margins narrow, as undoubtedly they will. Overhead costs

in poultry production should be kept as low as possible. The eight to ten dollars per layer that is invested in the average commercial egg farm represents a handicap when returns shrink. If possible, a gross return of at least 80 cents should be obtained for every dollar of investment. Maximum gross sales should be obtained. In some cases, the adoption of a sideline enterprise to the major one of egg-production may be desirable to keep equipment working and the volume of business on a high level.

Finally, with the end of war and the elimination of regulation, it is undoubtedly true that quality products will command attention and earn for producers of them the advantage of increased returns. With proximity to the large centers of consumption that the East enjoys, and the opportunity to encourage desirable consumer relationships, we should not lose sight of the importance of quality in our products. Eggs are never better than when first laid and the efficient producer who recognizes that fact and through care attempts to carry the virtues of the newly laid egg to the consumer will find himself in a strong competitive position when harder times arrive.

FUTURE EGG MARKETING PROBLEMS AND PROBABLE PRICES

ALFRED VAN WAGENEN

Marketing Specialist, Northeastern Poultry Producers Council

Man has longed for a view of the future from time immemorial. For all his advances in knowledge, he still must look to the stars, the arrangement of the tea leaves, the fall of the cards—yes—even the crystal ball, for a glimpse of what lies ahead. When one talks of the future, he must know, and his listeners must realize, that he is merely interpreting the signs and portents as he sees them. He may be right and he may be wrong.

With the warning that this is "just one man's opinion" of what lies ahead let's get out our imaginary crystal ball and gaze into it together for the next half hour. First off we shall try to see what lies in store for us as we market our eggs in the immediate future, say the next half year or so. Short-time crystal gazing is often more dangerous than long-time predictions, since folks usually can remember what was said for a short while, whereas the long-time prediction is forgotten before it comes about or is proved false.

Just so that we all start even, let's take a moment to review the situation as it is now. In marketing and in prices, the basic factors are still supply and demand. Try as we may, artificial or legal price regulation does not work for long when the adjustment between supply and demand dictates an extra-legal price.

It seems highly significant to me that a high German food official admitted, not too long ago, that the two commodities on which their

price regulations worked least effectively were eggs and poultry. Whatever else we may think of the Nazis, we must admit they had the art of regulation perfected to a remarkable degree. Yet they could not, by decree, regulate price.

I do not wish to infer that price control has been entirely ineffective. It has done some good. Just how much we cannot measure accurately. It has not worked too well with eggs and poultry, but, by and large most students of prices agree that we have "blundered through" with less inflation than we might have had. Furthermore, we shall probably continue to have price control in some measure (and that can mean floors as well as ceilings) for sometime to come. One can come to no other conclusion from the tone of the speeches and acts of the administration. It is not yet clear whether we are to go on a "cheap food" program, but that seems to be the official, though not publicly espoused, trend.

In a few words and figures the current situation for poultry and eggs is about as follows: The number of hens and layers on farms in the country has increased from a prewar average of 361 million layers (1935-39) to a peak of 518 million on January 1, 1944, or 43%. On January 1, 1945, one year ago, we had 460 million layers and the estimate for January 1, 1946, is about 475 million layers or about 30% more than prewar. These layers have produced, in 1945, about 55 billion eggs or 153 million cases, an increase of about 53% over the same prewar period.

Maryland, by way of comparison had an average January 1 prewar inventory of layers of 3.2 million and on January 1, 1946 an estimated 3.7 million or an increase of only 15%. Egg production on the other hand increased from a prewar average of 925 thousand cases to 1945's almost 1,200,000 cases, an increase of about 29%. This speaks well for the efficiency of Maryland poultry producers.

To summarize the supply picture: We have an increase in production by 1945 as compared with prewar years (1935-39) of 53% in the United States and indications that we have started 1946 with just as large a potential supply (layers) as last year.

On the demand side, eggs were consumed at the rate of about 298 eggs per person during the prewar years, but at the rate of 391 eggs per person in 1945. This civilian consumption amounted to about 145 million cases out of the 169 produced. The balance went to hatcheries, the armed forces and lend-lease allies. At this same time (1945) there was a national income of approximately 150 billion dollars compared with the prewar 60 billion and a shortage of one of egg's and poultry's strongest food competitors—meat.

Now, let's look ahead, with the aid of that crystal ball we were imagining a while ago. During the first six months of this year, we can expect practically as many eggs as we had last year during the first 6 months.

Remember, we start with even more prospective layers, but there will probably be more culling since the feed situation is very tight and egg prices will probably be somewhat lower as we shall see.

Consumers will probably continue to use eggs at a high rate, but not as high as when we had full employment and booming incomes, as occurred last year. The armed forces will require fewer eggs, but the consumers lost from the army will be added to the home consumption. It is not expected that they will quite offset the decline in army demand, since the boys in uniform ate eggs at about $\frac{1}{3}$ higher rate than did civilians. Lend-lease is over, and the foreign demand for our eggs at high prices is low. Last year, lend-lease took about 10 million cases of our eggs during the first 6 months in dried form. As it looks now, this outlet for eggs is gone and will be used only to dispose of eggs supported by the government.

An artificial demand, however, exists for eggs. Congress, through the Steagall Amendment, required egg prices to be supported at 90% of parity, which is about 28 cents a dozen for the first 6 months of 1946. Thus, the government is committed to furnish a demand for eggs sufficient to keep the price at this level during the first half of the year. The money for this job has already been appropriated, at least 125 millions of dollars of it, with a "rain-check" on more if it is needed.

The method to be used in supporting prices of eggs is to attempt to get as much as possible of any surplus in the form of dried eggs. This means that the middlewest will receive most attention, but of course, if we keep any surpluses of eggs out in the place they are produced that helps us, too. If the dried purchases are not sufficient to do the job, then frozen eggs will be purchased. Lastly, shell eggs will be bought, if the dried and frozen projects fail to accomplish the 90% of parity price. In the East, where we do not have drying facilities in large capacity, some shell eggs will be bought. There is a need for some shell eggs for the school lunch program and for certain other outlets. For these uses the eastern and west coast shell eggs will be purchased.

The prices for the program are based on middlewestern conditions, since most emphasis is on that area. They are to reflect an average of at least 27c per dozen to the producer for loose, edible eggs. Such shell eggs as are bought will be on a graded basis with appropriate prices to reflect the same return to the producer. The program is flexible enough so that if necessary a freight differential may be added to eastern eggs representing the normal geographical spread in prices.

Let's hope we don't need this program—some folks now think we won't. But my view of the crystal ball shows me egg prices at support levels during most of the spring months, starting not later than March in some areas at least. What does your view show? Some of you will probably

see the shadow of another meat shortage—and you are probably right, but I anticipate this will be offset by lower incomes.

Looking farther ahead, we see the government support program as legally in effect at least to the end of 1948. We also see 90% of parity as now calculated as a price that will not force too many of the folks who produce the bulk of the eggs out of business. The answer is, therefore, more emphasis on demand—let's get everyone to eat more eggs.

For poultry, and Maryland is an important state in poultry meat production as you well know, the immediate future looks as though the supply was ample—maybe too much so. There are now larger stocks of chicken in storage than we have ever seen before. We are producing more broilers than anyone thought possible 5 years ago. They have been eaten because people had money and little meat. Have you, as a producer, done everything you could to see that the chickens the consumers ate when they practically had to, were of the kind that made them want more? Judging by the quality as seen on markets this fall, much remains to be done on this.

Prices of poultry meat will probably be lower than last year at this time and will continue so throughout most of the spring—at about present levels. People are eating chicken—it's up to us, now, to keep them eating it.

Now let's look into the crystal ball at the most distant future and see if we can tell something about marketing practices. Before the war, the East expanded its egg production largely as a result of its nearness to market and its quality improvement programs. When, before and during the war, the demand and need for food expanded greatly, poultry and eggs producers were given every encouragement to expand and produce greatly increased quantities. This was a proper procedure since the production of no other meat foods could be expanded so rapidly and few are so valuable as protective foods in nutrition. We did expand, as our figures have already shown. But in that expansion we lost something.

We lost something that is going to cause us some grief if we don't get right back on the job. When consumers are anxious to get any kind of food, they take quite a different attitude toward the food that is offered them than when they have a wide selection from which to choose. We are beginning to find that out already in the case of chicken. That something is quality.

We hear on every side that the eastern producer has a tremendous advantage in quality because he is near his market. Quality loss is low. That is true, but we must remember that fundamentally the consumer as such does not have much interest in where the products he buys are produced—so long as they satisfy his desires. Advances in knowledge as to quality production and preservation have been great. There is no reason, even today, why the more distant producer cannot put as fine a quality product on the Eastern market as the nearby producer.

If the nearby poultryman is to maintain the advantage of closeness to market which he enjoys—he must not only get ahead of the crowd but keep there. In marketing as in so many other fields, the man who rests on his laurels and stands still is soon passed by. We have to advance to just keep even.

As I gaze into our crystal ball, I see some changes in our egg industry, for example. I think I can see consumers taking eggs of double A quality from cartons that were packed in the country with all the goodness and fresh appeal of newly laid eggs securely sealed in each shell. I'm not sure whether they are "thermo-stabilized" or "shell treated" or some other new process, but I do know that the consumer breaks each one open with confidence that what comes out of the shell is all good, healthful, strong bodied egg. I hope she has paid no attention to whether the eggs had brown or white shells.

The marketing machinery which brought her those eggs is changed a bit too. The eggs were processed either on the farm or within a day after they were laid at a centralized processing plant. This plant was built, in one instance by the producers themselves and in another by a privately owner organization. In either case, it was the producer who had the initiative to force the move, because it is he who pays the bill. It was he (collectively) who took the trouble to find out just what kind of an egg the consumer wanted and how to set up the marketing machinery to get it to her after he had produced it. We also see vending machines with roasted eggs available in the places where folks might want to stop for a bite.

Furthermore, the consumer reaches into her refrigerator for pre-sized and wrapped frozen eggs in measured amounts for her favorite cooking recipes. She removes the amount of egg white she wants, places it for a minute in the electronic defroster and uses it in her work. But enough of these glimpses into the egg future. Let's see for a moment what's happening to our chickens in 19XX.

Much of what we have seen in our crystal ball concerning changes affecting the distribution of eggs applies in principle to the poultry meat picture too. A complete survey of consumer desires will have been made. This same consumer who was using the fine quality eggs awhile back is now taking from her freezer a package of chicken. But this is no ordinary chicken as you and I know them. That breast meat—why it's three inches thick. At last we have a broad-breasted chicken. Furthermore, the packages in the freezer are assorted. Some contain only breast meat, some legs, others natural proportions, some turkeys in the same manner—but all of them are ready to use—just like the pork chops or beefsteaks you and I buy today.

Apparently, the breeders have been busy and have developed a real meat bird, fast growing, fast feathering and the market machinery has

developed a way to get that bird to consumers when, where and how they want them. The one thing that I can't quite see from my angle in the crystal ball is whether that chicken was packed in the East, the Midwest or even in this country. Perhaps the answer to that question is up to you?

To generalize very briefly from our view of the long-time picture, I see a few things you should do—

1. Put all the steam you can behind your experiment stations to get the information.
2. Put all the steam you can behind yourselves to put the information we already have and that they get into practice.

TURKEY GROWERS' PROBLEMS AND THEIR SOLUTION

WARREN D. JOHNSON, Nottingham, Pa.

The topic that has been assigned to me is a man-size subject. No two turkey growers have the same problems, so I will have to confine my remarks mostly to facts that have come to me from actual experience. Problems are rather easy to enumerate, but finding specific solutions is a real task. Problems vary with the type of turkey enterprise we are engaged in.

Some folks are specialists in the hatching angle and derive most of their income from buying eggs and selling poults. Some of these folks raise only the few poults left over from each hatch, or possibly the late hatches left unsold. Another group of turkey people buy poults in spring and sell finished turkeys on the hoof in the fall; usually they "clean house" at one time. If a profitable season was had, they are then free to go to Florida for the winter. A third group buy their poults but dress the finished birds, usually on order only. This type of business ties the grower much closer to the farm, as marketing often is not completed until after Christmas. A fourth group might carry on the preceding steps, but in addition maintain their own flock of breeders. Some in this class have their eggs custom hatched. Others also go the final step to be mentioned, i. e., they do their own incubation. Many other combinations can be made up of these phases of turkey production.

My own operations for the past 10 years have been carried on with a well-balanced program using all of the phases just mentioned. A visitor to our farm was asking some intelligent questions about whether we kept breeders; ran our own incubators; dressed our birds; sold feathers, etc., to all of which I answered "yes." He ended his questions with the remark, "Gee, you get all the profit, don't you?" There is really good food for thought in that remark, for there should be a profit in producing hatching eggs, in selling poults, in dressing, as well as in producing the turkey itself. If each phase is properly conducted, profits should be higher than when just one phase is carried on. Caution must be taken before attempting

such a balanced program to be sure that labor and proper equipment are available to carry on from all these angles.

It is very hard to make any recommendations along these "general plan" lines, as everyone has a different location and everyone likes a different type of work. Generally speaking, those having small acreage of high priced land near a populated section should specialize in selling retail and not raising so many birds. Those too far away for efficient retail marketing should raise more birds and sell wholesale in truck-load quantities. About the same amount of net profit should be derived from each plan. My own farm is located 40 miles from a good potential retail market where no competition exists. Time proved the folly of attempting to continue retail sales. The distance is too far for customers to come for their turkeys and delivering more than 200 or 300 retail birds in the short time available before each holiday is impossible. I am, therefore limiting retail sales to old customers and to those who will come to the farm. About 90 percent of my birds are sold to retail stores and restaurant trade.

This matter of a "general plan" perhaps isn't usually considered a problem but often the energy is not directed in the best direction. More will be said about this when I take up the marketing problem. Throughout my talk more emphasis will be directed toward increasing efficiency in the farm management plan rather than toward solving any individual problem.

Because commercial turkey growing is very much in its infancy many breeding problems are yet unsolved. It takes many years to carry research projects to a successful conclusion. In the days before large flocks, folks would exchange gobblers with a neighbor each year or send away and buy a tom for new blood. Flocks were small and there was ample space for them to hunt for a balanced diet. With many breeding flocks running into thousands of birds, breeding and reproduction offers a major problem.

Under reproduction we must consider fertility, hatchability, and livability. Low fertility the last several years has been a headache to those buying eggs and hoping to sell the poults at a profit. In the development of Broad Breasted birds little thought was apparently given to the carriage of the birds and as a result too many of the best sires were unbalanced and completed matings were not made as often as we would like. In flock matings this was especially true, as the larger and wider breasted toms were slower in mating and other toms had more time to come and offer interference. Single tom matings solve the problem of interference, but many times fertility is still lower than expected. Connecticut workers ran an experiment to find the cause. A large variation was found in the speed to which toms reacted to lights in production of live sperm for the production of early eggs. The interesting point was that the slower reacting toms did not make up for lost time in producing live sperm. Those toms that gave fertility earliest also maintained higher fertility as the season progressed.

I believe fertility to be my one biggest problem. It is difficult to solve because of the seasonal variation in turkey habits. Turkeys differ from chickens in that mating cannot take place until the hen is ready. The hens are ready most often before egg production begins and during the first few days of production. After production starts, much fewer matings are made. Therefore, if impotent or slow-reacting toms (in the case of producing early eggs) are in your matings you probably won't know it until it is too late to do anything about it. Several times I have changed my management of toms after egg production started with only fair fertility and found the change did not improve the fertility. Alternating of toms did not seem to help either in flock or one tom mating. I think there was better fertility in 2 toms to 25 hens than in 1 tom to 15 hens the past season. I will know more in a couple of weeks as several 20-hen pens will be ready to lay soon.

Now let's discuss hatchability as a problem. I always consider hatchability as entirely separate from fertility. I have never found in my flock much connection between the two. At the tail end of an 8-month season, when fertility was down as low as 23%, a 90% hatch of fertile eggs was taken off. As long as 80% of fertile eggs hatch into good poults I am well satisfied.

Hatchability is a "hot potato" in discussions and a good one, too. We had a fine symposium on this question at our last Pennsylvania meeting at Harrisburg. Here again we find that each problem is a case in itself and that which improved one situation will not necessarily improve another. Many times the incubation is at fault while the grower is looking for the feed men to improve the feed and vice versa. It takes experience to determine which is at fault. The incubator manufacturers will blame the eggs if you use their operating instructions. Then, when you find your eggs hatch good in somebody else's machine, you blame your own machine. For three or four years I had trouble getting poults to come out clean. Almost all that pipped would pip all the way around but failed to "kick the cap off." Those that were shucked were just as good as the others. I tried every possible combination of heat, ventilation and moisture with no improvement. As a last resort, I bought a small still air machine to get fine results. Now all poults are hatched the last two days in still air.

Contrary to all that is written, turkey eggs need low moisture rather than high. There are others that claim good results using the same make machines that I failed with. The best way to determine what machine to buy is to set your eggs in someone else's machine and be present when the hatch is taken off. I know several growers who moved incubators to other buildings with a lowering of hatchability. When the conditions were made identical with those in the first building, the results then became identical.

Incubation is a problem that must be worked out individually, using good common sense.

There is another phase of hatchability which is still more serious and

harder to remedy. That is the part that heredity takes. No one doubts that the ability of a poult to make his own way out of an egg is inherited if incubation conditions are correct. Unfortunately, breeding for any one desired feature must be done along with the work of improving all other desired features. There are strains of birds noted for high hatchability which hatcherymen like but many times the type of meat carcass is not desirable. I feel the Broad Breasted Bronze, on the other hand, were bred for meat type alone without adequate thought to hatchability. Many have told me that even the eggs that are fertile do not hatch too well. I have never used trapnests or even used pen matings as a means of finding which families produce the highest hatchability. But for some reason my strain is a desirable meat type and eggs seem to hatch quite well.

I hesitate to make a radical change in my program for fear that I'll lose control of some desirable feature in seeking improvement in another direction. The best example of poor type and good hatches is the native wild turkey. They have a triangle-shaped carcass as viewed from the side. Someday we might find some connection between poor type and good hatches and vice versa. No definite improvement can be expected unless at least a pen pedigree program is carried out.

Now let's assume the eggs have hatched and the poults are put in the brooder house. Without good livability our efforts so far are for naught. As a general rule, poults that hatch good and come clean and not sticky will be vigorous. Many poults showing lack of vigor are the result of poor incubation. Trial and error, or experience, is the only way to learn where to purchase your poults. Too often poults are bought from hatcheries having the largest and best sounding ad in your favorite farm paper. We should keep in mind that perhaps the ad has to be large in order to sell. I think it far safer to buy as near home as possible and after you have proved to your own satisfaction that the poults being considered really do live in customers hands. I think this a far safer plan than to rely only on an ad that says breeders are blood tested. If buying strictly from an advertisement be sure breeders were found pullorum clean by state laboratory or other qualified and impartial testing organization. The term "blood tested" only almost guarantees there is infection in the flock. Those that have done the most work on pullorum are the most insistent on having no tolerance of infection. Even when eggs or poults are supposed to be pullorum clean, the disease may be present.

I feel very unqualified to discuss livability from a disease-curing standpoint. I think I have been very fortunate and lucky so far in that I have yet to have a serious outbreak of any disease that can be called infectious. Therefore, I offer no advice in the use of medicines. If I didn't learn anything else during four years in college, at least I learned to beware of short cuts or cure-alls in the treatment of diseases. Qualified poultry pathologists admit there is no treatment for many diseases. Unfortunately, too many poultrymen, turkey growers and especially farmers believe that every bird that is sick needs medicine. When the qualified laboratory and

experimental stations say there is no treatment of proven benefit, the farmer turns to the feed dealer that will sell a cure or vaccine or bacterin. A check lot is never kept so we never realize the trouble might have stopped anyway.

My most serious trouble is apparently a management problem, as are many cases. Late hatched poults during the first cold nights of August pile up, get very thin and unthrifty, loss is about 50%. Those that live develop slowly. No pathological organism has been found. The only thing I've ever found was a simple enteritis caused, I think now, by the cold and piling up. This summer I plan to use kerosene or coal stoves for the late poults at least in half of the pens. Then there will be ample heat if a lack of it has been causing my losses. If you are experiencing unsatisfactory livability, by all means take specimens to a laboratory equipped to make diagnosis.

Poults should not be any more difficult to raise than chicks. The breeder who is pedigreeing his breeders can determine quite easily which families give best livability. Those that definitely give poor results should be discarded regardless of other good qualities. If you have failed to locate a dependable source of poults, my recommendation is to produce your own and assume responsibility for results.

Along with breeding as it pertains to reproduction we must consider what type bird we are producing. The type bird to breed is the type in demand by a predetermined market. I think it important to decide what market you will cater to and then produce a product that will meet those requirements. Rather than go into detail on this subject as a breeding problem, I prefer to pass on to marketing as a problem and discuss type as it affects efficient marketing.

There is no doubt in my mind that marketing is going to be our biggest problem in the next five years. During the war years production has increased, beginners have made good money and are expecting relatively high profits to continue. Very soon after the Army stopped buying turkeys the past summer, prewar conditions were with us again. The large bird panic was on and the wide differential in price between large and small turkeys was present.

In a few days I received a wire from the National Turkey Federation office asking me to attend a hearing in Washington called to put pressure on the Army to resume buying turkeys. Central Vice-President McCulley testified that offers in Minnesota were 27c. Congressman Andrissen of Minnesota quoted a wire from home quoting a 21c offer. These prices were for large turkeys and only a few weeks after the fighting had stopped.

To market the increase in turkey production efficiently and at a profit, we must recognize what I am going to call the "What", "When" and "How" of market requirements.

By "What" I refer mainly to what *size* is desired. I took the time to tabulate my Christmas orders just to see what the distribution of size

requirements were. Turkeys were available from 8 to 25 pounds. Fifty percent of the customers ordered 8 to 14 pounds; 87.7% 8 to 18 pounds and only 12.3% over 18 pounds. These orders were for birds to be consumed in homes. If 80% of the crop is consumed in homes and 87% of the consumers want birds weighing under 18 pounds, we are not producing what the consumer wants if we produce birds of 15 to 30 pounds. If we assume 80% of the turkeys grown are a large strain, half of them being toms too large for household use, 40% of the entire crop will be left for 20% of the buyers (which will be hotel trade).

We must realize the foolishness of trying to outdo each other in growing the biggest birds. Here's a real job for breeders, to reduce the size of the present-day B. B. B. The small type (U. S. D. A.) white, if they are as small as reports indicate, are probably too small. One solution is a medium-sized turkey, preferably white, as they can be marketed to better advantage while still immature.

The "When" of consumer requirements brings up the problem of having turkeys available whenever the housewife wants one. By lengthening out the market season we can double the consumption.

By the "How" of consumer requirements I refer to marketing your product in a manner most appealing to the housewife. It might be fresh killed and drawn, it might be frozen and eviscerated, especially for out of season use, or it might be only a few pounds of cut-up turkey. The Sherman Hotel of Chicago put on an elaborate demonstration for N. T. F. of several ways of preparing cut-up turkey. Fried in deep fat, fried Maryland style, roasted, barbecued and deviled. Mr. Byfield, Exc. Chef, predicted all turkeys would be eviscerated in future marketing. He also expressed no preference for fresh killed over frozen birds. I consider his remarks significant as the Sherman Hotel is no amateur in this business. They use 500,000 pounds annually and buy their year's supply all at one time.

The use of cut-up turkey will only progress slowly at best, but I think it has great promise as it is the only way that turkey meat can compete with lamb chops or pork chops when apartment house dwellers and small families buy a few pounds of meat for a mid-week dinner. Cut-up turkey is not a good substitute for a whole roast turkey for a holiday dinner but will help use up some of the excess large birds if offered to the housewife in the manner that other frozen foods are.

While we are on this subject of marketing let me call your attention to the "EAT MORE TURKEY CAMPAIGN" that got under way last summer in Chicago at a meeting of N. T. F. directors. I hope you have read about it in the TURKEY WORLD. Mr. Beyers, Chairman of N. T. F. Marketing Committee, had been cautioning us about the possibilities of more turkey than the market could absorb after the Army stepped out of the buying picture. I realize now how right he really was. We in the East will always be at a decided advantage over those far from markets when it comes to marketing an oversupply of turkey. However, the excess

of the West will be shipped East in direct competition with Eastern fresh-killed. We must also remember that many Western birds are just as good as ours when they come off the killing line, but lose much of their good quality, and thus their competitive power before they reach the consumer. If these birds are eviscerated under government inspection and quick frozen in air and moisture proof wrapping we will have strong competition from a much better product. The quota set for contributions to this campaign is only 1c per turkey. The money will be spent by the P. E. N. B. to produce a still film on proper turkey cooking to be used in home economics classes, county agents' demonstrations, etc. It is hoped this will create interest in turkey consumption. You may contribute even though you don't belong to N. T. F. However, the Federation also needs your support. Dues are one-tenth of one cent per bird.

As I was asked to discuss our problems and their solutions, I will be bold enough to predict that our biggest problem will be to get the public to eat the increase in turkey production which is sure to come. The first step in this direction can be taken today by sending your support to N. T. F. or its consumption campaign. If you prefer, I will accept your contribution and give a receipt.

The next step will take longer. We must realize the necessity of offering the housewife what she wants, when she wants it, and in the manner she likes it best. Let's start thinking more about producing a size bird the consumer wants instead of seeing how big we can raise them!

HATCHERY OPERATORS' RESPONSIBILITY IN IMPROVING CHICK QUALITY

GEORGE M. ELLIS, Ocean View, Delaware

As a hatchery operator and breeder, I am quite convinced that most hatchery operators do not realize their own responsibility in improving chick quality for broiler growers and egg producers.

Since most of them do not appreciate their responsibility, most of the chicks produced by commercial hatcherymen are not of as good quality as they should be. This is true in spite of the beautiful catalogues put out by some of the hatcherymen. In fact, I am sure that some of the catalogues contain a lot of bunk about a lot of junk.

Many hatchery operators carry on no organized breeding program and some of them do not take the necessary steps to keep the spread of disease in the incubators at a minimum.

Most hatchery operators fall down on three points that have a direct bearing on the quality of chicks produced.

1. Lack of proper relationship with flock owners.
2. Inadequate control of diseases.
3. Do not use enough birds from high producing strains.

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The poultry industry of Maryland, or any other state, would be improved materially and better quality chicks produced if hatchery operators would carry out a program of cooperation mutually satisfactory to both groups. A hatcheryman should talk over poultry breeding and hatchery problems with each of his flock owners. In that way each flock owner would have confidence in the hatcheryman's integrity. The flock owner on his part would take more interest in producing the quality in hatching eggs desired by the hatcheryman. Every hatcheryman ought to realize that the quality of chick produced in the hatchery is very largely determined by the quality of hatching egg secured.

We take too much pride in showing visitors our shining incubators, forgetting that the only thing an incubator can do is not to hurt the egg. It can not improve the egg. Hatcherymen, therefore, should think more about the flocks from which their hatching eggs are secured and make it more profitable for flock owners to stay in the business of producing hatching eggs.

As things stand now, many hatcherymen have too much turnover in their flocks every year. What hatcherymen should be interested in is developing a sufficient number of flock owners to produce the number of hatching eggs of quality that he desires and then hold on to them.

Unfortunately, diseases of one kind or other are spread through incubators. It is well to fumigate and disinfect an incubator for the control of pullorum, even when the hatching eggs are obtained from flocks that are free from pullorum disease. The pullorum test, however, is not 100% accurate, even in the hands of properly trained persons. Therefore, fumigate and disinfect the incubators in a proper manner to prevent spreading any pullorum organisms that may be present in the eggs. Also, disinfection of the incubators is necessary to control other diseases. In addition, aside from the disinfection of the incubators, the incubator room and plant should be kept scrupulously clean at all times.

The use of more high-producing strains is a good investment. What if pedigree cockerels cost a dollar a piece? We can expect to get 500 chicks per cockerel, which means $1/5$ of a cent per chick. A pedigree cockerel from a well-bred strain would pay the cost seven times over in rapid growth if broilers are raised and in more eggs if laying flocks are kept. Most hatcherymen do not appreciate the importance of good egg production in breeding stock to produce broilers. Good egg production in New Hampshires and Barred Plymouth Rocks is important, however, to cut down the cost of chicks.

Many hatcherymen are so anxious to sell baby chicks that they sell their own chicks for replacement, when their stock is definitely inferior, because they will not sacrifice the small profit made on a baby chick for much greater profit that they can make the following year in better hatchability or chick prices. They also ignore the additional profit that their chick buyers might have made by having the improved stock and that their

hatching egg producers could have made by having better stock. For example, many strains of birds will lay three dozen more eggs than others. This would mean one dollar more profit per hen for each person buying these superior chickens and more than one dollar more profit per hen to the flock owner. Or an improvement of 5% hatchability is worth approximately 50 cents more to the hatcheryman in a year's time, per hen.

In the broiler business, chicks that will produce one-fourth pound more chicken with the same feed, are worth 5 cents apiece more.

These are only a few of the characteristics that are inherited and can be influenced by breeding. But they are enough to show that breeding stock is so important an item that the price of baby chicks is nothing to consider.

Whatever breed or breeds you are using should all be of the same strain. This makes for uniformity and people can depend on getting the same quality chicks each time.

The second point of the flock owner relationship is largely an economic one. Hatcherymen must be far-sighted enough to pay enough for hatching eggs so that the best poultrymen can be interested in it. Too many times the premium of hatching eggs has not been great enough to pay the cost of maintaining cockerels, blood testing, breeder mash, etc. We need the most skilled poultrymen in the industry to reproduce breeding stock and they are smart enough that they are not going to be sucked in on a low-premium, short-term proposition.

The poultryman who is going to stay and make money in the future, must be smart and must be a keen business man. This type of individual is willing to pay a premium price for premium stock. This was proven during the early 30's, when the breeder hatchery came into prominence. When times are tough, the smart poultryman wants the best stock he can buy. Breeder hatcherymen cannot begin to supply the need for quality chicks and the hatcheryman can serve a real purpose by reproducing this stock and making it available in large quantities for the poultry industry.

This is a real challenge to the hatcherymen, for in their hands alone lies the responsibility of improving chick quality.

To summarize, if the hatcheryman makes sure that the people he buys from and sells to make more money dealing with him, he need have no worry about the future.

THE MERITS OF ROP IN DEVELOPING MORE EFFICIENT STRAINS OF POULTRY

ALBERT B. GODFREY, U. S. Department of Agriculture

Many hatcherymen may not realize the importance of the part U. S. ROP has played in producing efficient strains of chickens. This breeding stage of the plan has been criticized in past years because recognition is given to birds on the basis of their pedigree and individual performance.

At the present time, U. S. ROP is generally thought of as being a breeding program in which the breeder's operations are under supervision and official recognition is given records made and the products sold.

The history of U. S. ROP only goes back to the beginning of the plan in 1935. State supervised ROP programs started in the State of Washington in 1923. Similar programs were started soon after in Massachusetts, Iowa, New Jersey, Michigan, New York, Ohio, Connecticut, Delaware, Indiana, and Missouri. By 1935 there were 23 States with individual ROP programs. At the present time breeders in 45 of the 48 States are participating in the U. S. ROP breeding stage of the National Poultry Improvement Plan.

During the first few years of ROP work too much emphasis was placed on high individual egg production records. Other economic factors such as egg size, hatchability, and livability were not considered to the extent they are today. With the beginning of the national plan, recognition was given to progeny testing by the adoption of the U. S. Register of Merit breeding stage.

Meat Quality Factors

Until recently U. S. ROP breeders in general have neglected meat quality factors. In fact, some of our best broiler strains of the New Hampshires and Barred Rocks were developed by using a high degree of selection at an early age, and with very little trapnesting.

Highly hereditary factors can be rapidly fixed in a strain by simply using individual selection. Such factors as rate of feathering are simple in their inheritance. The breeders know that if they mark a sufficient number of sex-linked, rapid-feathering chicks to use for breeders they can have a pure rapid feathering strain. Pedigree breeding is not necessary in breeding for such a highly hereditary factor.

On the other hand, factors like rate of production and persistency are highly influenced by environmental factors and can be accurately measured by trapnesting on a family basis. The broiler strains usually have very good egg size but show a high instance of broodiness. Egg size is known to be highly hereditary whereas broodiness is influenced more by environmental factors and not simply in its inheritance.

During the war emergency years, egg prices and premiums on hatching eggs were sufficient for flock owners to make a satisfactory profit. It is generally believed that the margin of profit will be less in the future. Some of the broiler strains have been reported to lay less than 150 eggs on a hen-month basis. A strain may have to lay more than this number on a hen-housed basis to be profitable in the postwar years. When a number of breeders consistently have flock averages of more than 200 eggs, the average of 173 eggs for all U. S. ROP candidates as shown in table one may not be considered very good. This is especially true of those people who read so many advertisements of individual 300-egg birds. An average of 173 eggs on a hen-housed basis, however, is equivalent to more than

200 eggs on a hen-month basis. It will be noted also in this table that the individual breed averages range from 183 eggs for White Leghorns to 114 eggs for White Wyandottes. The average of 157 eggs for White Plymouth Rocks is 14 eggs higher than the breed average two years ago, which shows that this popular breed can be improved. The average egg weight and body weight for each breed are satisfactory.

TABLE I
*Average Egg Production, Egg Weight, and Body Weight of U. S. ROP
Candidates for 1943-44*

Breed	Hen-housed egg prod.	Aver. egg weight	Aver. body weight
S. C. W. L.....	183	25.0	4.4
New Hampshire	161	25.4	5.5
B. P. Rock.....	163	25.1	6.0
W. P. Rock.....	157	25.7	6.1
S. C. R. I. R.....	179	25.1	5.9
White Wyandotte	114	24.8	5.5
All Breeds	173	25.2	5.0

Selecting Breeders on a Family Basis

The breeders who have produced strains that average 200 or more eggs on a hen-housed basis have used a much more effective method of selection than those selecting their breeding birds on the basis of individual records. They select their breeders on the basis of family performance. They not only remate all cocks and hens that have very good progeny, but they also use as breeders the sons and daughters of such matings.

TABLE II
*Average Egg Production of Daughters on the Basis of the Classification
of the Male's Parents*

Classification of male's parents	No. males	Hen-housed average egg production of daughters
Non-Honor Roll	320	172.6
Honor Roll Dam only.....	77	178.1
Honor Roll Sire only.....	66	203.0
Honor Roll Sire and Dam.....	169	211.9
Total.....	632	186.9

Table 2 clearly illustrates the importance of selecting cockerels from good families. Progeny records of 632 cockerels were grouped and compared according to whether their sires and dams qualified for the U. S. ROP Honor Roll. In order to meet this qualification, a sire must have

40 or more daughters and a dam 8 or more daughters that average 200 or more eggs and 24 or more ounces per dozen. It will be noted that sons of U. S. ROP honor roll families had daughters to average approximately 40 eggs more than the daughters from sons of non-honor roll families. Sons of honor roll sires only had daughters averaging over 200 eggs.

Some breeders progress more with their breeding program than others. The hen-housed average for two breeders in the middle western States are as follows for examples during a period of five years:

Year	No. 1	No. 2
1940-41	184	195
1941-42	192	199
1942-43	204	194
1943-44	211	209
1944-45	222	223

Each of these breeders trapnested approximately 1,500 White Leghorn candidates each year.

Hatcherymen's Use of Good Strain

Hatcherymen often fail to realize full value out of cockerels of an efficient strain. They often purchase stock of an efficient strain and mix that with a number of other strains. It may be desirable to cross two efficient strains that are known to mix but the resulting progeny should not be used for breeding. The two strains should also be carried pure for additional crossing the following year. The only breeding program followed by some hatcherymen is to cross some new strain on their old flocks of mixed strains.

The program of establishing key flocks of good strains is the most practical practice known for the hatcheryman at the present time. This type of a program enables him to multiply good strains at a minimum cost.

DIRECTORS' MEETING AND BUSINESS SESSION

Minutes of Fourteenth Annual Winter Meeting

The Directors' meeting was presided over by Mr. J. W. Snoddy, President.

Minutes of the previous Directors' meeting were read and approved.

The President appointed the following committees: Nominating—Messrs. H. Rieck and A. R. Peterson and Mrs. W. P. Eckrich. Auditing—Messrs. E. Matthews, W. P. Eckrich, and R. Morris. Resolutions—Mrs. W. W. Hopkins, and Messrs. W. A. Spearin and M. A. Jull.

The Secretary reported that 20 Honorable Mention ribbons had been secured to be awarded to meritorious entries in egg exhibits by Vo-Ag and FFA members who were not winners of cash awards. Ernest Matthews

moved and Harry Rieck seconded the motion that Secretary's action be approved. Motion passed.

The Secretary explained that requests had been made that more cash prizes be awarded among Vo-Ag and FFA entries than at present. A motion made by Mrs. W. W. Hopkins and seconded by Mr. A. R. Peterson was adopted requesting the President to appoint a committee to report at the next meeting of the Directors.

Very favorable comments were made regarding the 1946 Maryland Poultry Yearbook and a motion made by Harry Rieck and seconded by George C. Brown was passed to the effect that plans be made for publishing 1947 Yearbook subject to approval at Business Session.

The Business Session of the Council was held after the Directors' meeting, with J. W. Snoddy presiding.

After considerable discussion, it was moved by Bounds Phillips and seconded by Ernest Matthews that the Maryland State Poultry Council affiliate with the Broiler Growers Division of NEPPCO, the annual dues of which are \$25.00 and the Council being entitled to one director's vote at the business meeting of the Division. Resolution passed unanimously.

The Treasurer's report by Mrs. W. W. Hopkins showing a balance of \$2,638.53 as of January 5, 1946 was approved.

M. A. Jull presented a statement covering 1946 Yearbook. The gross receipts from advertising amounted to \$1,134.50. Subtracting discounts and commissions charged by advertising agencies left \$1,048.37 for the Council. The expenses of publishing and mailing the Yearbook amounted to \$487.76, leaving a net balance to the Council of \$560.61.

Harry H. Rieck moved and A. R. Peterson seconded a motion that the Council publish a Yearbook in 1947. Motion passed.

Authorization was given for paying the annual dues to NEPPCO, the Maryland Farm Bureau Federation, the Broiler Growers Division of NEPPCO, and the contribution to the Poultry and Egg National Board.

Russell C. Hawes reported for the Legislative Committee that no immediate legislation was in the offing. He said that it was hoped they could secure the services of a Home Demonstration lady to give demonstrations on the use of eggs in the diet. A regular place on the radio is being given for information on eggs and poultry and on marketing.

On motion of Mrs. Hopkins, seconded by Mr. Peterson, the Secretary was authorized to secure needed stationery.

Election of officers for the ensuing year: President, John W. Snoddy, Riverdale; First Vice-President, Walter A. Spearin, Salisbury; Second Vice-President, Wm. J. Flohr, Union Bridge; Treasurer, Mrs. W. W. Hopkins, Cordova; Recording Secretary, Samuel Ahmuty, Odenton; Secretary Pro-tem, Morley A. Jull.

Director to NEPPCO, Harry Rieck; Delegates to NEPPCO from cooperatives, Wm. J. Flohr and Letcher Colona, Pocomoke; Delegates to NEPPCO from Council, Mrs. A. W. Sattler, Monkton, and Samuel Ahmuty, Odenton; Delegate to Maryland Farm Bureau, J. W. Snoddy; Director to Broiler Growers Division of NEPPCO, Walter Spearin.

The Council decided to hold a summer meeting in 1946.

RESOLUTIONS

Increased Appropriation for Fresh Egg and Sizing Law

WHEREAS future problems in marketing eggs will be very serious and the necessity for improving the average quality of market eggs in Maryland will be greater than ever,

AND WHEREAS adequate administration of the Maryland Fresh Egg and Sizing Law requires more funds to accomplish the objectives of the Law for producer and consumer,

THEREFORE BE IT RESOLVED that the State Legislature be requested to increase the present appropriation of the Fresh Egg and Sizing Law to \$12,500 in order that a comprehensive educational program can be carried on.

Increased Pullorum-Testing Appropriation

WHEREAS there is continued need for more extensive pullorum-testing work to be done with poultry breeding flocks, especially turkeys, in order to reduce losses from disease,

AND WHEREAS many more hatcheries and hatchery flocks should qualify for the pullorum-passed stage of the Maryland Poultry Improvement Plan,

THEREFORE BE IT RESOLVED that the State Legislature be requested to increase the present appropriation to \$25,000 for pullorum-testing work in the State, said funds to be administered by the State Live Stock Sanitary Service.

Increased University Facilities For Broiler and Turkey Investigations

WHEREAS the broiler and turkey industries have increased in relative importance as branches of Maryland's poultry industry,

AND WHEREAS there is great need for more studies on methods of selecting breeding stock to develop better strains of broilers and turkeys in order that Maryland poultry producers can improve the quality of their poultry to compete successfully on the markets of the future,

THEREFORE BE IT RESOLVED that the Maryland State Poultry Council urge that the College of Agriculture provide facilities for developing better strains of turkey breeding stock and chicken breeders for the production of broad-breasted broilers.

ANNUAL MEETING
OF THE
Maryland Nurserymen's Association

Baltimore, January 9, 1946

Approximately 75 nurserymen attended the annual meeting of the Maryland Nurserymen's Association at the Lord Baltimore Hotel in Baltimore on January 9, 1946.

President Homer Kemp opened the meeting with a plea to the nurserymen to "cooperate and go together and go forward." He emphasized the many changes that are sure to take place in changing from war to peace, and advised the nurserymen to face the future by keeping pace with the ever-changing conditions.

Dr. Chadwick Speaks

Under the topic "Nursery Business of the Future," Dr. L. C. Chadwick of Ohio State University pointed out practical problems confronting nurserymen in operating during the immediate postwar period. He urged every nurseryman to thoroughly analyze his business and emphasized the importance of finding the profitable phases and then revamping to fit the need. Other problems discussed by him included: the satisfied customer, good stock, the future of dwarf materials, efficiency in propagation, and labor.

Address By Frank LaBar

One of the most impressive talks of the day was by Frank LaBar of Stroudsburg, Pennsylvania. Leavened with anecdotes, he emphasized the need for organization. He predicted excellent business for the immediate future. Speaking with sincerity and straight from the shoulder, Mr. LaBar urged nurserymen to put forth good thought in both local and national organization. He told the group that organizations that stay united as well as club-minded will find profitable business in the days to come when business is not too easy.

New Research Developments

Dr. Ernest N. Cory, Maryland State Entomologist, discussed the usefulness of DDT as an insecticide. Dr. L. W. Kephart, Senior Agronomist, Bureau of Plant Industry, Beltsville, reviewed new developments in weed killers, giving special emphasis to developments of the herbicide 2-4-D.

John Baringer, Director of Research, American Association of Nurserymen, Washington, D. C., after bringing a message from Secretary Dick White on some of the activities of the National Association, outlined the need for research in the nursery industry. He stated that it was the

intention of the AAN to look into the betterment and advancement of the nursery business. Problems for research, he said, should come from the nurserymen themselves and be carried on by the Association.

Jesse P. King Honored

The afternoon session was opened by presentation of a certificate of achievement to Jesse P. King, Ridgeville Nurseries, Ridgeville, Maryland. In making the presentation, Dr. T. B. Symons, Dean and Director, University of Maryland, paid tribute to Mr. King as a horticulturist and a kindly man dedicating his life to the enjoyment of others. The certificate read:

"This is to certify that the Maryland Nurserymen's Association, having observed the distinguished achievements of

Jesse P. King

do hereby confer upon him this Testimonial of Recognition of his meritorious services in promoting the nursery industry and the interests dependent thereon.

Given by the Association in Annual Meeting assembled in Baltimore, Maryland, this ninth day of January, in the year of our Lord, nineteen hundred forty-six."

Two topics of special interest were the basis of panel discussions. Speakers on the first topic, "The Labor Situation in the Nursery Industry," were Burbage Harrison, Harrisons' Nurseries, Berlin; Dan Stoner, Westminster Nurseries, Westminster; and Paul E. Nystrom, In Charge of Farm Labor, Extension Service, University of Maryland. Speakers on the second topic, "Nursery Stock Production and Marketing Conditions," were: George Colborn, Bountiful Ridge Nurseries, Princess Anne; Henry Hohman, Kingsville Nurseries, Kingsville; and Patsy Donofrio, Carroll Gardens, Westminster.

Hardy Broadleaf Evergreens

A most profitable and interesting hour was spent in discussion of hardy broadleaf evergreens for landscape purposes under the leadership of Guy Stricklen of Towson Nurseries. He provided valuable information on the hardiness of a long list of material, as well as notes on methods of transplanting, mulching and pruning materials susceptible to winter injury.

Help For Victory Gardeners

Pointing out the gains made by nurserymen through the Victory Garden program, Edward Stock, of Stock Bros. Nursery, Bethesda, emphasized the interest many people have developed in gardening. He pointed to the love these people have developed for gardening, and called upon the nurserymen to keep in close contact with these new gardeners. He advised that many of them are no longer novices and that many are transferring their thoughts from vegetable growing to ornamental horticulture. He

called upon the group to give these people all possible help with their new venture.

The following officers were elected for the ensuing year:

President—L. H. Willis.....	Hyattsville
1st Vice-President—Hale Harrison.....	Berlin
2nd Vice-President—J. H. Burton.....	Hyattsville
Secretary—Paul Hofmann	Towson
Educational Secretary—George S. Langford.....	College Park
Treasurer—Edward Stock	Bethesda

Executive Committee—

J. H. Burton, Hyattsville; L. G. Tingle, Pittsville; Daniel B. Stoner, Westminster; Jack Rayner, Salisbury; Milo Coplen, Rockville; Burbage Harrison, Berlin; Roland Bailey, Hebron; C. W. Price, Towson.

Following a discussion of veterans' training by Dr. C. H. Mahoney, Head of the Horticulture Department, University of Maryland, the meeting closed with appointment of a committee to draft a code of ethics for the Nurserymen's Association. Appointed on that committee were: Henry Hohman, George Colborn, Paul Hofmann, Ed Stock, Joe Merritt, and Sam Hemming.

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